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Canada's export strategy:  
the international trade  
business plan, 1995/96





# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

***1995/96***

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
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  - Instrumentation
  - Software Products and Computer Services
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16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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# The International Trade Business Plan Is ...

The International Trade Business Plan (ITBP) lays out government strategies and activities in support of international business development. It enables the private sector to influence the development of those strategies and become involved in the proposed activities. It is managed by the federal government in partnership with the provinces and Canadian industry.

The ITBP is designed to strengthen the connection between global demand and Canadian supply capability. It also provides linkage between trade development, trade policy, investment development, and technology transfer, each of which is essential to Canada's success in international markets.

The consensus reached by the various partners involved throughout the ITBP consultation process is reflected in this and the companion documents. These documents are made up of three components: an overview, a series of industry sector strategies, and accompanying lists of planned international activities.

- **Overview:** The **ITBP Overview** provides the broad context for the individual industry sector strategies detailed in the Plan. It comprises four elements: a **Strategic Overview** summarizing the Government's main trade policy and international business development objectives; a **Geographic Overview** identifying opportunities, challenges and priorities by geographic region; a list of **Cross-sectoral Activities** to be undertaken in support of international business development; and the addresses of the **Canada Business Service Centres**.

- **Industry Sector Strategies:** The main component of the ITBP consists of 23 individual sector profiles that detail how the Government will work with industry to take advantage of emerging global trade, technology and investment opportunities. Each strategy provides a summary of international business development priorities for the given sector, and is the result of close consultation with the private sector.

- **International Activities:** A list of international activities is appended to each sector strategy. These lists are the product of government-industry consultation, and represent the specific activities governments intend to sponsor in support of each sector strategy. Canadian companies are invited to participate in these events, and are encouraged to contact the listed department or agency for details.


## We Want to Hear From You!

The ITBP is continually being revised in response to feedback from our clients. Your views on how the ITBP could be improved are important to us. If you have comments or questions, or want to find out how to become more actively involved in the process, please contact the ITBP Working Group:

**Telephone: 1-613-944-ITBP (944-4827)**

**Fax: 1-613-996-9265**

We also invite you to take a moment to complete the enclosed one-page questionnaire.



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## Executive Summary

Canada must succeed in international markets. Our prosperity and standard of living depend on our ability to sell competitive products and services abroad, attract international investment and acquire global leading-edge technologies. Economic growth, fuelled by our international business performance, is also essential to restore Canada's fiscal health.

For most Canadians, however, Canada's success in international markets means one thing — jobs. Exports and investment are key instruments of job creation. Improving Canadian export performance is therefore central to the Government's jobs and growth agenda.

The priorities identified in this document are premised on four broad objectives: diversifying Canada's trade, technology and investment relations beyond traditional markets; building stronger partnerships with the private sector; encouraging more Canadian small- and medium-sized enterprises (SMEs) to become active traders; and improving co-ordination of federal and provincial international business development programs and activities. Ensuring that domestic and international business development policies and programs are mutually supportive is also essential.

### Trade Policy Objectives

#### GATT/WTO and the Uruguay Round

As a trade-dependent country, Canada must have secure access to foreign markets based on a strong international trading system. The General Agreement on Tariffs and Trade (GATT) has therefore been the cornerstone of Canadian trade policy.

Our most important multilateral trade objective is to ensure the effective implementation of the Uruguay Round agreements and to turn gains in access to world markets into increased exports and

job opportunities for Canadians. This will be pursued by working to ensure the establishment and effectiveness of the World Trade Organization (WTO) and improving co-ordination and co-operation among the WTO and major economic powers and other major international economic organizations. Canada will also pursue outstanding Uruguay Round negotiations and explore new initiatives that go beyond existing commitments. Further liberalization under the newly established General Agreement on Trade in Services (GATS) will be high on the agenda. In addition, Canada will work within the WTO and other trade and economic forums to address a range of "new" trade policy issues such as: trade and the environment; competition policy; investment; technology and information infrastructure; and government procurement.

Canada will also promote the negotiation and expansion of regional and bilateral trading arrangements that complement and enhance the international trading system under the GATT/WTO.

#### North American Free Trade Agreement

The Government believes that the North American Free Trade Agreement (NAFTA) will continue to generate new market and investment opportunities — and jobs — for Canadians. Deepening and broadening the NAFTA will therefore be an important objective. This will be pursued by seeking to extend the provisions of the NAFTA in critical areas such as trade remedies, trade in services, and procurement. The Government fully supports efforts to widen the NAFTA within the hemisphere, such as the accession of Chile to the Agreement. While promoting NAFTA accession, Canada will continue to build other institutional trade and economic ties with Latin America.

**International Institutions**

Canada attaches high priority to the work of the Organization for Economic Co-operation and Development (OECD), and will continue to promote further trade liberalization within this forum. Canadian priorities will build on the post-Uruguay Round trade agenda and centre on the issues of environment, investment, competition, technology and telecommunications.

The Asia-Pacific Economic Co-operation (APEC) forum is an increasingly important vehicle for helping existing international rules work better while contributing to the development of the agenda for the next round of multilateral trade negotiations. Canada will therefore work within APEC to increase regional understanding of trade policy matters and further the cause of freer trade and investment worldwide.

Canada is a major contributor to various multilateral development banks, including the World Bank and various regional development banks. The Government is currently looking at a range of options to improve Canada's participation and performance in the procurement business associated with these institutions.

**Domestic Initiatives in Support of International Business****Support for Small- and Medium-sized Enterprises**

Improved access to foreign markets is critical. But Canadian companies themselves must have the capability to seize promising trade, technology and investment opportunities as they arise. The Government will therefore encourage more Canadian SMEs to become active exporters and explore international investment partnerships. Government support for SMEs will focus on providing firms with market intelligence on export opportunities, investment, strategic alliances, technology transfer, market access and competitiveness issues.

**Private-sector Involvement**

Ensuring that government resources devoted to international business development meet the needs of Canadian industry is essential to achieving Canada's economic growth objectives. The Government will expand private-sector involvement in its trade fairs and missions program and encourage SMEs to become active exporters by focussing Program for Export Market Development (PEMD) resources on firms with annual sales of less than \$10 million. Industry involvement in the preparation of The International Trade Business Plan (ITBP) will be increased. Other initiatives will be pursued in the areas of export preparation, service sector SMEs, export financing, international investment and technology partnerships.

**Government Co-ordination and Co-operation**

Better co-ordination between governments is critical to Canada's international business development efforts. A major objective will be to increase efficiency through enhanced co-operation among all levels of government. The federal government will work with provincial governments to implement and improve the Internal Trade Agreement to eliminate barriers to trade, investment and mobility in Canada. The "Team Canada" approach to international business development will be pursued. Efforts will be made to integrate the representation of the federal and provincial governments outside of Canada, and to establish "one-stop shops" for all federal and provincial international business development activities domestically. In addition, the ITBP will be strengthened by expanding participation by provincial governments and linking government resource allocation decisions to the Plan.

**International Science and Technology Objectives**

The development and acquisition of best-practice process and product technologies is critical to ensuring that Canadian firms are competitive in world markets. The Government's priorities



include: establishment of a Canadian Technology Network; follow-up to the federal Science and Technology Review; improved international science and technology (S&T) intelligence; broader international research and development co-operation; and support for Canada's information highway.

### **Competing for International Investment**

Economic growth and job creation are increasingly tied to our ability to attract investment from abroad. Building on existing investment development programs, the Government will work with Canadian companies to capitalize on Canada as a base from which to penetrate the NAFTA market. It will also target new and expanded investment for Canada by building on Canadian industrial strengths.

An important objective will be to provide potential investors with value-added, timely responses to their inquiries, and to turn a higher number of these inquiries into investment intelligence upon which governments and the private sector can act. Helping Canadian SMEs gain secure access to international venture capital will also be a priority. The Government will work with companies to protect and increase their international market share by helping them identify international investment opportunities that allow them to expand globally.





## Strategic Overview

### Introduction: The International Business Imperative

Canada must succeed in international markets. Our prosperity and standard of living depend on our ability to sell globally competitive products and services abroad, attract international investment and acquire global leading-edge technologies. Economic growth, fuelled by our international business performance, will also play an important role in restoring Canada's fiscal health, and is essential to address this country's growing current account deficit (the combination of our merchandise and non-merchandise trade balances). In 1993 alone, this deficit amounted to more than \$30 billion.

to international trade. By some estimates, each additional \$1 billion in exports creates about 11 000 new jobs — jobs that are likely to provide the kind of rewarding, high value-added employment that Canadians want. Improving Canadian export performance is therefore central to the Government's jobs and growth agenda.

Fortunately, the trade, technology and investment opportunities open to Canadians today are unprecedented. Large potential new markets are emerging for Canadian goods and services in areas of the world that have seen rapid economic growth in recent years, such as Latin America and Asia-Pacific (particularly China and India). In addition, the successful completion of the Uruguay Round and the implementation of the North American Free Trade Agreement (NAFTA), together with the expansion of the European Union, and political and economic transformations in Russia and Central and Eastern Europe, will generate new international business opportunities for Canadian companies.

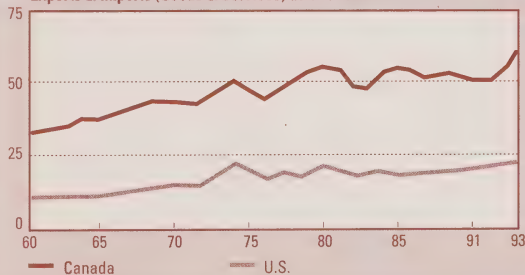
But seizing these opportunities will not be easy. Growing world markets and further progress in trade liberalization will not automatically translate into additional export sales — or jobs — for Canadians. Indeed, competition will be fierce. Like Canada, other industrialized countries are looking to international markets to provide them with the kind of robust economic growth that their domestic economies can no longer generate.

While the private sector must clearly lead the way, the Government has a vital facilitating role to play in improving the fundamental conditions for attracting investment, exploiting international technologies and expanding exports for growth and job creation.

The priorities identified in this **Strategic Overview** are premised on four broad objectives: diversification, partnership, participation and efficiency.

#### Importance of International Trade to Canada

Exports & Imports (Goods & Services) as % of GDP



Source: Statistics Canada & International Monetary Fund

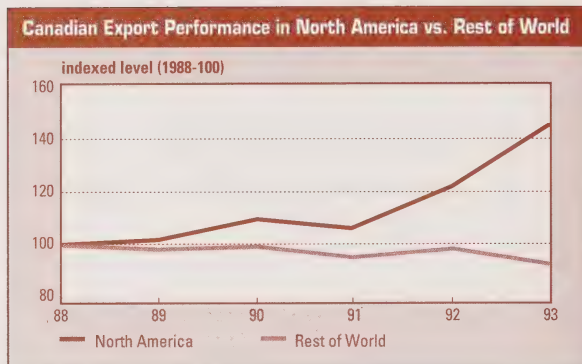
For most Canadians, however, Canada's success in international markets means one thing — jobs. Exports and investment are key instruments of job creation. Already, some three million working Canadians (one out of every four) owe their jobs

**Diversification:** Canada has often been described as a trading nation. Today, exports of goods and services account for almost one third of Canada's gross domestic product — a level surpassed only by Germany among G-7 countries. While Canadians may take comfort in this fact, and often see themselves as global traders, the reality is that Canada has been a truly successful trader only with the United States. Currently, over 80 percent of Canadian merchandise exports are destined for the United States. The U.S. also continues to be the major source of international business investment in Canada and the destination of much of Canadian direct investment abroad. As with exports, the diversification of the sources and destinations of investment is a priority.

Clearly, Canada must build on its success in the U.S. market and broaden its trade, technology and investment relations, particularly in its traditional European market and with the rapidly expanding areas of the Asia-Pacific and Latin America.

**Partnership:** Government has an important role to play in helping Canadian business recognize and capture global market opportunities, and must work closely with industry to shape international business development policies and programs. Close co-operation between the private sector and all levels of government is also critical to acquire best-practice technologies and capital that can help Canadian firms become more competitive and profitable.

**Participation:** Canada may be a trading nation, but it is not a nation of traders. At present, only one in four firms exports anything, and over half of all Canadian exports derive from 50 companies. Helping more Canadian firms — particularly SMEs — to become active traders is therefore one of the Government's major international business development priorities. The reason for targeting SMEs is simple: they represent the most likely source of new jobs. By targeting assistance to



Source: Statistics Canada (Catalogue 65-001)  
Index based on current dollar data, customs basis

SMEs, government can have an important impact on a firm's decision to engage in export activity. Efforts to help Canadian SMEs build international investment partnerships can provide firms with the capital, technologies, managerial skills, and access to markets they need to grow at home and employ Canadians.

**Efficiency:** More effective co-ordination of federal and provincial international business development programs and activities is a key component of the Government's efforts to streamline, reduce costs, and eliminate overlap and duplication. By working together, governments can also ensure that programs are more effective.

While these objectives provide the backdrop for the individual priorities identified later in this section, there is another fundamental reality of which the Government is keenly aware: domestic and international programs cannot be developed in isolation. Rapid globalization and trade liberalization have meant a growing convergence between international and domestic issues. Ensuring that our domestic and international business development policies and programs are mutually supportive, and not working at cross-purposes, will be essential to their success.

## Trade Policy Objectives

### Multilateral: GATT/WTO and the Uruguay Round

As a trade-dependent country, Canada's continued growth and prosperity depends on secure access to foreign markets. Canadian interests are best served by a strong international trading system founded on stable, internationally agreed-upon rules and procedures. The General Agreement on Tariffs and Trade (GATT) has therefore been the cornerstone of Canadian trade policy. Indeed, the successful conclusion of the Uruguay Round and the signing of the World Trade Organization (WTO) agreements represent a major achievement of Canadian trade policies over the past four decades.

Legislation to implement the results of the Uruguay Round was considered by Parliament last fall, and approved by both Houses before the end of the year, thereby enabling Canada to announce its formal acceptance of the WTO agreement before the January 1, 1995 deadline.

With so many countries involved, the Uruguay Round negotiations were complex and difficult. The results, however, were substantial. Canada set out major objectives for the Round early on, including a significant and comprehensive market access package, the full incorporation of agriculture into international trade disciplines, a multilateral agreement on trade in services, the development of fairer and improved trade rules, particularly in the areas of subsidies and countervailing duties, and a stronger and more effective dispute settlement system. These goals, developed in close consultation with the provinces and the private sector through a process of formal and informal consultations, were met or surpassed as part of the final outcome of the Round. Further, and perhaps most importantly, the agreement to create a World Trade Organization to integrate all of the outcomes of the Round and to provide a central forum for the management of the world's trading system, was a major result of the Uruguay Round, from Canada's perspective.

The GATT Secretariat estimates that, over the next eight years, the agreement will cause global trade to expand by more than \$1 trillion over and above that which would have been achieved otherwise. Canada's Department of Finance estimates that the benefits for this country will be in the order of at least \$3 billion a year, when the agreement is fully phased in.

With the successful completion of the latest round of multilateral trade negotiations, Canada's most important multilateral trade objective will be to ensure the effective implementation of the Uruguay Round agreements and to turn gains in access to world markets into increased exports and job opportunities for Canadians. The overriding aim will be to maximize Canada's share of the projected \$1 trillion growth in worldwide trade that the Agreement is expected to generate. (*See discussion of ACCESS '95. This new government initiative is designed to transform hard-won gains in access to foreign markets under the WTO into tangible business opportunities for Canadian SMEs.*)

The Government intends to pursue this objective on several fronts, building on many of the trade policy recommendations contained in the recent report of the Special Joint Committee on Canada's Foreign Policy.

**I World Trade Organization (WTO)** — The WTO will provide a solid institutional base from which to manage a strong, rules-based trading system, while facilitating the implementation of the new Uruguay Round agreements, administering the dispute settlement and the trade policy review mechanism processes, and providing a forum for further trade negotiations. As such, the WTO will put international trade on a firm institutional basis by becoming the third pillar of the world's economic and financial structure, along with the World Bank and the International Monetary Fund (IMF). It will also provide for greater political surveillance of the system by trade ministers in the coming years.



The Government views the implementation of the WTO (a proposal originally advanced by Canada, together with the European Union) as a major priority. The establishment and effective institutionalization of the WTO (e.g. councils, committees, working parties, dispute settlement body, appeals tribunal, trade policy review mechanism) is critical to the effective implementation of the WTO agreements. Canada is therefore playing a leading role in the complex, detailed preparatory work required to get the WTO up and running. The Government will also work to improve co-ordination and co-operation between the WTO and the Group of Seven Leading Industrialized Countries (G-7), the Quadrilateral countries (i.e. Canada, the United States, Japan, European Union), and other important international economic organizations (i.e. IMF, Organization of Economic Co-operation and Development, World Bank).

- **Post-Uruguay Round Initiatives: Unfinished Business** — While implementation of the Uruguay Round results and the establishment of the WTO are important priorities, it is essential that countries maintain the momentum for trade liberalization by completing outstanding Uruguay Round negotiations and exploring new initiatives that go beyond existing commitments. In the area of services, there was agreement that negotiations should resume in a number of areas, such as financial services, maritime services, basic telecommunications, and temporary entry of personnel. The Uruguay Round also led to important reductions in tariffs and non-tariff barriers. Canada, however, believes that these reductions do not go far enough, and will be preparing new initiatives in the coming months, in consultation with the private sector. Areas in which further tariff liberalization could be pursued at an early date include: electronic and scientific equipment; non-ferrous metals; wood; wood products; oilseeds; and oilseed products.

For Canada, further liberalization under the newly established General Agreement on Trade in Services (GATS) is a key objective. Canada will also work within the WTO and other important trade and economic forums (e.g. the Quadrilateral Trade Ministers' Meetings, G-7 Economic Summit, OECD, APEC) to pursue other "new" trade policy issues aimed at maintaining the momentum of trade liberalization and eliminating "domestic" barriers to expanded international trade. Such issues include trade and the environment, competition policy, investment, labour standards, technology and information infrastructure, and government procurement.

- **Regional/Bilateral Trading Arrangements** — Canada will promote the negotiation and expansion of regional and bilateral trading arrangements that complement and enhance the international trading system under the GATT/WTO, with a view to further opening markets and improving the rules under which trade is conducted. Within North America, broadening the NAFTA and extending the Agreement to other potential NAFTA partners will be major priorities. Canada will also continue to give strong support to the Asia-Pacific Economic Co-operation (APEC) forum (see below). In the run-up to hosting the APEC Summit in 1997, Canada will emphasize "open regionalism" as the key to APEC's approach to building a more open and transparent multilateral trading system. In addition, the Government will pursue expanded market access opportunities with selected trading partners and will consider, in special circumstances, the negotiation of bilateral free trade agreements with individual countries.
- **Non-GATT Member Countries** — While promoting the negotiation of regional and multilateral trading arrangements that complement and enhance the international trading system under the WTO, Canada will

pursue, in special circumstances, bilateral trade agreements with states that are in transition from the command economy system, and that are not GATT/WTO members. The nature of such agreements is that of a basic Most-Favoured Nation (MFN) agreement, with non-preferential elements. In this connection, Canada signed a bilateral trade agreement with Russia in 1992, and a similar agreement with Ukraine in March 1994. Negotiations are also under way with Estonia, Latvia, Lithuania, Kazakhstan, Viet Nam and Mongolia. It is expected that agreements will also be negotiated with other states of the former Soviet Union (FSU).

Canada will focus efforts on five new potential GATT/WTO members (China, Taiwan, Russia, Ukraine and Saudi Arabia) to ensure effective access to sectors of greatest interest to Canadian companies.

### **Regional/Bilateral: North American Free Trade Agreement**

Canada's decision to enter into the NAFTA, which came into force on January 1, 1994, builds on its fundamental commitment to expand multilateral, rules-based trade within the new World Trade Organization. An essential element behind Canada's ratification of the NAFTA was the creation of Working Groups on subsidies and dumping that will address long-standing Canadian concerns about disputes arising from countervailing and anti-dumping duties.

The Government believes that the NAFTA will continue to generate many new market and investment opportunities — and jobs — for Canadians. It maintains the view, however, that the NAFTA is incomplete. The need to deepen and broaden the Agreement, as underlined by the recent Special Joint Committee on Canada's Foreign Policy, is therefore an important government objective. This will be pursued by various means:

- **Deepening the NAFTA** — Canada will work to extend the provisions of the NAFTA in critical areas such as trade remedies, trade in services, and procurement. This will be achieved, in part, through the Working Groups created to seek solutions to trade disputes arising from the use of trade remedy laws in the three countries.

- **NAFTA Accession** — Canada supported the NAFTA in the belief that it would continue to evolve into a non-discriminatory, comprehensive free trade regime fundamentally open to all countries willing to abide by its rules and disciplines. In this context, the Government fully supports efforts to widen the NAFTA within the hemisphere, and will work, on a priority basis, to assist the accession of Chile to the Agreement.

Canada has taken the position that all countries that agree to abide by the NAFTA rules should be welcome to become members.

- **Other Ties with Latin America** — At the December 1994 Summit of the Americas in Miami, Canada agreed with the other countries of the hemisphere, to work toward the creation of a Free Trade Agreement of the Americas by 2005. Governments have begun an examination and assessment of existing free trade arrangements, including Mercosur, the Andean Pact, the G-3 and CARICOM, to chart the future course of liberalized trade throughout the region. Canada will continue to build other institutional trade and economic ties with Latin America. In this regard, several Foreign Investment Protection Agreements (FIPAs) and Double Taxation Agreements (DTAs) are already being negotiated. Within the region, Canada currently has DTAs with Brazil, Argentina and certain Caribbean countries, and FIPAs with Argentina and Uruguay. It is also addressing barriers to free trade, such as non-harmonized product standards, both bilaterally and in regional forums. Within the Organization of American

States (OAS), Canada is working to ensure that the Special Committee on Trade fulfils its new mandate to provide technical assessments of hemispheric trade policy issues. The Department of Foreign Affairs and International Trade (DFAIT) also promotes stronger commercial ties with Latin America through non-governmental organizations such as the Canada Council for the Americas (CCA).

- **The NAFTA and the Multilateral Trade Agenda** — Canada will work to develop new collective approaches among NAFTA partners to deal with pressing trade policy concerns. Canada believes that the NAFTA, as a more comprehensive regime of rules than the GATT, provides an opportunity to move further and more quickly toward the goal of trade and investment liberalization while expanding the boundaries of the rules-based trading system. Indeed, in areas such as dispute settlement, investment, trade in services, and procurement, the NAFTA has already moved well beyond the kind of consensus that has been achieved at the larger and more slow-moving multilateral level.
- **Competing for Investment** — Canada must increasingly compete for direct investment with its NAFTA partners as well as with newly emerging and high-growth economies around the world if it is to provide jobs and prosperous communities for its citizens. The Government will therefore work with industry to develop more strategic and targeted approaches to promote Canada as an investment site within the NAFTA. One technique will be to target Chief Executive Officers (CEOs) and boards of international companies, to actively encourage them to expand investment in this country. By positioning Canada as the investment location of choice for both multinational enterprises (MNEs) and smaller, globally oriented firms, and strategically targeting decision makers within these companies, the Government hopes to influence companies' investment location choices. The focus will be on presenting specific

investment opportunities based on Canada's existing and emerging regional industrial strengths (e.g. research and development relationships among universities, government laboratories and core technology-producing companies; industry's supply capabilities; etc.).

## International Institutions

### Organization for Economic Co-operation and Development

The Organization for Economic Co-operation and Development (OECD) is a unique forum in which 25 industrialized democracies work together to study and formulate effective economic, trade and social policies. This is achieved through mutual review of policies and policy performance and co-ordination of domestic policies, legislation and regulations where they impact on other economies, particularly in the fields of trade and investment. Through this process, the OECD helps member governments to frame their national policies and to define the broad outlines of their positions in other forums at the regional and global level (e.g. GATT, WTO, United Nations Conference on Environment and Development [UNCED]).

The medium-term priorities of the OECD are to safeguard and promote the open, rules-based multilateral trading system, while fostering understanding of new trade challenges by developing rules and disciplines that could be used in new policy areas. Priority activities of the trade committee include such issues as trade and the environment, trade and competition policy, and various domestic policy issues (e.g. agriculture, investment, industry, technology). Canada believes that progress on these new trade issues can best be achieved through initial research by bodies such as the OECD, rather than by proceeding immediately to the WTO, where the lack of a common initial understanding could lead to potential negotiating conflicts and the creation of new trade barriers.



As a founding member, Canada attaches high priority to the work of the OECD. Accordingly, it will continue to promote further trade liberalization within the OECD by ensuring that the trade committee develops a concrete and achievable work program based on the post-Uruguay Round trade agenda. The focus of our priorities will be the issues of environment, investment, competition, technology and telecommunications.

#### **Asia-Pacific Economic Co-operation Forum**

Within the fast-growing Asia-Pacific region, Canada sees the APEC forum as an increasingly important vehicle for ensuring that international rules work better within a region of vital interest to Canada's economic future. Canada sees APEC as the primary instrument for the pursuit, on a regional basis, of our global trade liberalization agenda. Canada supports the vision developed by the Eminent Persons' Group and the APEC Business Blueprint developed by the Pacific Business Forum.

In his address to APEC trade ministers at Jakarta in November 1994, Minister for International Trade Roy MacLaren laid down four tracks for further progress in regard to APEC's trade liberalization agenda: (a) rapid implementation of the Uruguay Round commitments and accelerated tariff cuts; (b) investment liberalization; (c) a freeze on agricultural export subsidies; and (d) standards and conformance in one or two priority sectors. He also emphasized the necessity of ensuring that APEC meets the needs of all members, while serving as a useful vehicle for regional trade facilitation and economic co-operation.

Canada has actively participated in APEC's work in such areas as the environment, telecommunications, human resource development, marine resources conservation, fisheries and transportation. Canada also chairs the Economic Committee established at the Ministerial Meeting in Jakarta in November 1994. With respect to future work within APEC,

Canada anticipates much greater focus on small- and medium-sized enterprises.

#### **Multilateral Development Banks/International Financial Institutions**

Canada is a major contributor to various multilateral development banks, including the World Bank and various regional development banks: Asian Development Bank (AsDB), Inter-American Development Bank (IADB), African Development Bank (ADB), European Bank for Reconstruction and Development (EBRD) which, along with the IMF, are often referred to as international financial institutions (IFIs). In fact, this country currently ranks fourth to seventh in terms of contributions to these specific institutions. Unfortunately, in part because of the limited international presence of many Canadian firms, Canada's procurement performance at the various development banks has been low relative to other OECD countries (in the range of tenth to twelfth). Currently, Canadian companies win approximately \$360 million per year in procurement from the various IFI lending programs. This represents only 1 percent to 2 percent of the total effective IFI market available to foreign suppliers, estimated to be about US\$12 billion per year.

And yet, IFI procurement is arguably more important to Canada's international business development efforts than to those of many other countries. IFI projects are targeted at developing countries — countries where Canada's export penetration is often very modest. They can therefore be an important vehicle by which to diversify Canadian trade, technology and investment beyond Canada's traditional markets.

The Government is therefore exploring various options to improve Canadian participation in multilateral bank procurement activities. These will focus on:

- identifying Canadian companies with an international presence and encouraging them to make the necessary investments to compete for IFI-related projects;

- encouraging Canadian bids on IFI projects by developing the means to provide industry with timely project intelligence, market information and advice;
- reviewing all relevant government programs and initiatives, including export financing, CIDA Industrial Co-operation and Bilateral Programs, various CIDA and DFAIT consultant trust funds, and mechanisms for placing Canadians within IFIs abroad, to determine if they can be used more strategically in support of Canadian commercial interests;
- reviewing — and developing responses to — impediments to the success of Canadian suppliers;
- improving Canada's representation within IFIs by seeking to have more Canadians with industry knowledge and expertise placed in strategic areas within these organizations.

## Domestic Initiatives in Support of International Business

### Support for Small- and Medium-sized Enterprises

Creating international business opportunities for Canadian firms through various trade policy mechanisms is critical. But the mere existence of such opportunities cannot ensure greater Canadian success in global markets. Companies themselves must have the capability to seize promising trade, technology and investment opportunities as they arise.

A major thrust of the Government's international business agenda will be to encourage more Canadian SMEs to become active exporters and explore international investment partnerships. (Other new initiatives target Canada's rapidly growing business services sector.) SMEs represent the fastest-growing component of the Canadian economy. They are also the most responsive to rapid change, and are responsible for creating most new jobs. Their potential for creating new jobs in the future is even more promising. SMEs are therefore central to the Government's jobs and growth agenda.

Government support for SMEs will focus on the following areas:

### Market Information and Intelligence

Government has an important role to play as a provider of strategic information to the private sector — ensuring that industry clients have the right information, in the right form, at the right time, so that they can make the right business decisions. Industry has said that government must make strategic information on export opportunities, outward investment, strategic alliances, technology transfer and market access and competitiveness issues more readily available, particularly to SMEs, which often lack the resources to obtain global market intelligence. The Government will therefore work to improve its ability to provide industry clients with the kind of timely, targeted, strategic information they require. This will be achieved through the following means:

- **Trade Commissioner Service (TCS)** — For over 100 years, Canada's Trade Commissioner Service has played a vital role in helping Canadian firms explore and exploit international business development opportunities. With 130 offices in 84 countries, as well as International Trade Centres across Canada, the TCS is Canada's largest overseas market information and commercial intelligence network. Its role is to promote and protect Canada's international business development interests. To ensure that Canadian businesses continue to get the support they need abroad, the Government, working with the private sector, is strengthening the ability of the TCS to respond to changes in the international environment.
- **Information/Intelligence Collection and Dissemination** — The government network of Sector Expert Groups (SEGs) — an important vehicle for collecting and disseminating intelligence across governments and to the private sector — will be expanded. In addition, dissemination of international

business information and intelligence will be improved by expanding a variety of informatics tools and information delivery systems (i.e. Market Intelligence Messaging System [MIMS], Trade Team Canada Database [WIN Exports], Electronic Bulletin Board, ACCESS '95, FaxLink, ENVINET).

**■ World Trade Access 1995 Initiative (ACCESS '95)**

— To maximize Canada's share of the \$1 trillion in new growth that the results of the Uruguay Round are expected to generate over the next decade, the Government recently launched ACCESS '95. This initiative is designed to ensure that Canada's international business development resources are focussed on opportunities that offer the highest payoff for industry.

By targeting opportunities arising from the Uruguay Round, the Government hopes to encourage SMEs that geared up to export under the Canada-U.S. Free Trade Agreement (FTA), to expand into offshore markets. At the same time, it is hoped that many new SME exporters (and established larger firms) will be encouraged to exploit new market opportunities throughout Latin America, Asia-Pacific and Europe.

ACCESS '95 will:

- establish a database to identify specific improvements in tariffs and non-tariff barriers representing significant gains in Canadian access for some 200 major products and 11 service sectors in 42 priority markets;
- generate market intelligence from Canadian missions abroad that targets the best new opportunities and provides guidance on key factors to compete in emerging markets;
- use the Government's market information and intelligence network to communicate this intelligence to firms quickly and directly;
- provide expertise that explains the complexities of the WTO measures and their five- to ten-year implementation schedules, along with advice on the best approaches to overcome foreign barriers.

**■ Trade Barriers Inventory**

— The Government will develop a detailed inventory of external trade barriers encountered by Canadian exporters. Work has already begun on barriers in six countries (India, Australia, Japan, Taiwan, Israel and Brazil), with others to be added in the months ahead. A similar inventory of internal, domestic barriers (i.e. federal and provincial policies, practices and programs) that work against the international competitiveness of Canadian firms will also be compiled. This information will be used to quantify the cost of such barriers to Canadian industry and to develop an action plan for their removal, both domestically and internationally.

**■ Sector Competitiveness Frameworks**

— The Government will continue its work with industry to develop a series of detailed sector competitiveness frameworks. Each framework will provide an in-depth analysis of the main issues challenging the sector, describe the performance and structure of the industry, assess its competitive position, and identify emerging trends. Opportunities for more concerted action by government and industry to help companies build the infrastructure needed to compete successfully will also be identified.

**■ Canada Business Service Centres (CBSC) Network**

— Canada's network of business service centres is jointly sponsored by the federal and provincial governments and the private sector. CBSCs are a cost-effective way to provide Canadian business with fast access to information on government services, programs and regulations. To improve the existing CBSC network, the Government will work to extend service to other communities across Canada, in co-operation with various



business-oriented organizations. It will also expand efforts to make information directly available to clients on the information highway.

- **Business Networks** — Business networks allow successful SMEs from any economic sector to co-operate and collaborate in seeking business opportunities. They can also help SMEs acquire world-class business skills, gain access to new financial instruments and capital, capitalize on their competitive advantages, and expand into global export markets. To complement the many regional and sectoral business network initiatives going on across the country, the Government will work to conclude an agreement with the Canadian Chamber of Commerce to undertake a National Business Networks Demonstration Project. The project will provide for broad dissemination of information, regional round tables, network broker training, and support for business networks in a number of economic sectors and regions of Canada.

#### **Private-sector Involvement**

Ensuring that government resources devoted to international business meet the needs of Canadian industry is essential to achieving our international business development objectives. The Government will therefore expand private-sector involvement in the following areas:

- **Trade Fairs and Missions Program** — The Government will invite the exporting business community to become more actively involved in developing the Government's trade fair program. To this end, government resources will be focussed on major fairs that have the support of Canadian business. To enhance the efficiency of outgoing trade missions, a system of cost-sharing will also be implemented to ensure that participating firms are serious about the market and that they are genuinely export-ready. In addition, innovative ways to meet the special needs of new service exporters will be explored.

- **Program for Export Market Development (PEMD)** — To encourage smaller firms to become active exporters, the Government will focus PEMD resources on firms that have annual sales of less than \$10 million — those most likely to benefit from government support. Accordingly, eligibility criteria for funding under PEMD will be revised so that preference is given to such firms. To better serve the serious exporter, the Market Development Strategies portion of PEMD will also be changed so assistance can be provided for the implementation of a company's two-year marketing plan, beyond the existing one-year option.

Industry involvement in the preparation of the International Trade Business Plan (discussed in the next section) will also be strengthened.

- **Export Preparation/Preparedness** — A key component of helping Canadian firms become successful exporters of goods and services is to ensure that they are export-ready. The Government will therefore encourage potential new exporters to enrol in export preparation programs, such as those offered by the Forum for International Trade Training (FITT). Consideration is also being given to developing a FITT program for service exporters. A multimedia kit on the topic of preparing to export services will be released in the near future, with emphasis on several specific markets.
- The Government will also explore how to improve service for companies by linking the level of government service available to them to their level of export-readiness. This could be achieved by adopting a "filtering-in" approach, whereby appropriate government resources would be focussed on companies that are genuinely export-ready (and therefore more likely to succeed in the international marketplace).
- **Aboriginal Exporters** — Canada's Aboriginal entrepreneurs have demonstrated a growing ability to market their products and services internationally. Culturally based sectors such as

food, tourism, arts and crafts, fashions and music recordings are notable examples. Potential also exists in many non-traditional sectors in manufacturing, forestry, construction, transportation, distance education and others. Exports of Aboriginal consulting services have been successful in helping other Aboriginal businesses export to Central America and various developing countries.

The Government intends to undertake a variety of activities that promote awareness of Aboriginal export capabilities, and will be working with export-ready and near-ready Aboriginal firms to expand exports. This will be achieved by:

- facilitating access to existing exporter assistance programs and improving these programs, where possible;
  - developing special focus market planning and export-readiness training;
  - encouraging Aboriginal participation in missions and trade fairs;
  - establishing sectoral initiatives in sectors of strength such as tourism, food products, environmental industries and consulting services.
- **Industry Associations Outreach** — To promote the growing business services sector, a number of industry associations will be contacted, and their members surveyed, to determine priority export markets and market information needs within this sector. The Government will then work with each association to develop a specific export action plan. Other potential initiatives include the creation of industry association export committees, workshops, and other activities.
- **Export Financing** — Lack of access to financing is an area that represents a major challenge for many SMEs with export potential. The Government will work with companies and Canadian financial institutions to improve SMEs' access to information on export financing and export development

services (e.g. by encouraging the banking industry to become a more effective source of information and counselling for exporters). It will also work with the Export Development Corporation (EDC) to develop new and innovative ways to increase operating lines of credit for smaller exporters, and measures to broaden SMEs access to medium-term financing. In addition, through co-operation with the Canadian Commercial Corporation (CCC) and financial institutions, it will seek to establish a mechanism to help SMEs obtain pre-shipment financing for export contracts.

- **Market Maximizer Events** — Each year, the Government proposes to support a small number of "Market Maximizer Events" of interest to both SMEs and larger firms. These are events that have strong potential to promote Canadian business internationally and therefore merit exceptional support in terms of preparation, implementation and follow-up. To qualify, an event must meet certain basic criteria regarding the presence of foreign visitors and exhibitors, the level of Canadian content, the degree of Canadian industry endorsement, and the availability of training for new exporters. The Government proposes to fund these events on a cost-shared basis with the private sector.

- **International Investment/Technology Partnerships** — The Government is currently working with approximately 700 Canadian SMEs, primarily in high-technology sectors, to help them find international investment partners and sources of best-practice technologies. Such efforts will be expanded to include more companies in other sectors. Greater use will also be made of multimedia technologies to introduce potential international partners to Canadian SMEs.

## Government Co-ordination and Co-operation

Better co-ordination and harmonization between governments is critical to Canada's international business development efforts. Clearly, federal and provincial governments must work in partnership with each other — and the private sector — if programs to promote Canada's success in world markets are to be effective. An important objective will be to increase efficiency through enhanced co-operation among all levels of government.

- I **Internal Trade Agreement** — If Canadian firms are to compete successfully in international markets, Canada's domestic and regulatory regimes must nurture and support competitive advantage. The federal government will work with provincial governments to implement and improve the Internal Trade Agreement to eliminate barriers to trade, investment and mobility in Canada. (The Agreement was signed by the First Ministers in July 1994.) Working with all parties concerned, the Government will seek to broaden the scope of the Agreement by extending its provisions to Crown Corporations and the municipal, academic institutions, schools and hospital sectors. To facilitate the streamlining of regulations and the reduction of compliance burden on companies across provinces, the Government will also explore the merits of a federally-led intergovernmental initiative on regulatory reform.
- I **Trade Team Canada** — To minimize overlap and duplication among governments, encourage greater economy and efficiency of the use of public resources, and provide a better level of service for private-sector clients, the Government will promote a "Team Canada" approach to international business development. A major element of this approach, as recommended in the recent International Business Development Review, will be to pursue efforts to integrate the representation of

the federal and provincial governments outside Canada. The Government will also work with provincial governments to establish integrated "one-stop shops" for all federal and provincial international business development activities domestically.

- I **International Trade Business Plan** — The Government will strengthen The ITBP by encouraging greater, direct participation by industry and fuller participation by provincial governments. It will also move to directly link the ITBP to government resource allocation decisions, as recommended in the recent International Business Development Review. Finally, it will ensure more rigorous year-over-year follow-up to the ITBP planning exercise, both to measure the degree to which priorities match actual undertakings, and to measure progress made toward achieving strategic objectives over time.

## International Science and Technology Objectives

The development and acquisition of best-practice process and product technologies is critical to ensuring that Canadian firms are competitive in world markets. As globalization of the world economy proceeds, and the importance of science and technology (S&T) to competitiveness grows, it is essential that firms have access to world-class technologies. As well, international collaboration in research and development (R&D) by both the private and public sectors is increasingly important for Canada to attain its economic and social development objectives. Current priorities include:

- I **Canadian Technology Network** — The Canadian Technology Network is being established to provide Canadian SMEs, especially in manufacturing and related service industries, with access to the technologies and technology management information and advice they need to compete in world markets. International sourcing of technologies will also



be improved through the Technology Inflow Program and Technology Development Officers at Canadian missions abroad.

- **Science and Technology Review** — The federal Science and Technology Policy Review has identified several areas where action is needed to better ensure that Canadians take advantage of worldwide developments in science and technology. One area that has been highlighted is the need for Canada to attach higher priority to setting international standards. This will provide better opportunities for Canadian standards to be accepted in international markets, and for Canadian companies to influence international standards. Perhaps more importantly, it will provide a window to anticipated technological developments on a worldwide basis.
- **S&T Intelligence** — The Government will review its role in providing Canadian industry, particularly SMEs, with international S&T intelligence. It will also seek ways to promote Canada's image internationally as a sophisticated, advanced S&T country. Increasing the international awareness of Canada as a source of advanced technology goods and services and as a location for R&D will attract both buyers and international investors. This objective will be pursued as a joint effort between government and the Canadian business community.

#### ■ **International Research and Development** —

The Government has recently concluded arrangements that will permit increased opportunities for Canadian firms to participate in international R&D programs. A framework agreement with the European Union (EU) allows Canadian firms to participate in R&D consortia established under the EU Program on Research and Technological Development. The Intelligent Manufacturing Systems program is a joint effort of the EU, European Free Trade Association (EFTA), Japan, the United States, Australia and Canada to provide a basis for industry-led R&D collaboration in advanced manufacturing technologies.

- **Bilateral Initiatives** — The Government will continue to support selective co-operation with individual partners. Priorities include expanding industrial R&D co-operation with Germany; seeking co-operation in strategic sectors with Japan through the Japan Science and Technology Fund; and the recent establishment with Israel of a private Canada-Israel Industrial R&D Fund.

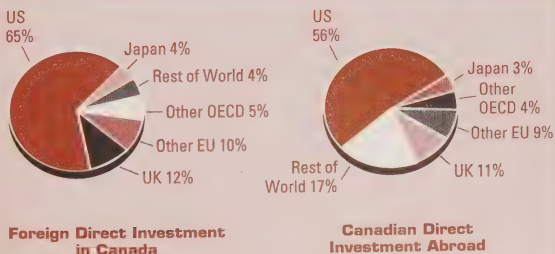
#### ■ **Canadian Network for the Advancement of Research, Industry and Education (CANARIE)**

— Government support for Canada's information highway (CANARIE) is based on ensuring international competitiveness by providing Canadians with access to worldwide information networks. Such access provides a solid foundation for developing competitive technology-based hardware and software products and services for world markets. The Government will continue to work with industry to develop international partnerships to capitalize on this investment and to ensure that Canadian industry is fully involved in the much larger opportunities in the United States, Japan and Europe.

#### **Competing for International Investment**

Government priorities of economic growth and job creation are increasingly tied to our ability to attract investment and technology from abroad. MNEs and smaller, global firms are major sources

**Inward and Outward Investment  
Key to Jobs and Growth in Canada**



Source: Statistics Canada, 1993

of investment and new, best-practice technologies. According to a recent UN World Investment Report, foreign direct investment, as managed by transnational companies, is increasingly the driving force of international economic transactions. Communicating the opportunities for profit and growth for foreign companies that invest in Canada — opportunities that help Canadian firms develop competitive advantage — is an important priority. Building on existing investment development programs, the Government will also work with Canadian companies to capitalize on Canada as a base from which to penetrate the NAFTA market. With increasingly fierce international competition for investment, Canada's "bottom-line" attractions and favourable investment climate will need to be marketed aggressively.

Other priorities include:

- **Attracting International Investment** — The Government will make the case to CEOs and boards of international companies for new and expanded investment in Canada. The focus will be on developing and marketing specific opportunities based on comparative advantages and regional industrial strengths for attracting job-creating and technology-bearing investment to Canada. Such investment, often from foreign multinationals and medium-sized global companies, represents one of the key ways by which Canadian firms can gain access to foreign best-practice technologies. The Government will target those companies that can bring new capital and technologies to Canada, invest in innovation, serve as catalysts for technology diffusion within the country, and integrate with Canadian SME suppliers.
- **Investment Intelligence** — Each year, the Government receives thousands of inquiries from potential international investors. These inquiries represent a strategic source of intelligence for all levels of government and Canadian companies about foreign investor interests and intentions. The Government's objective is to provide potential investors with value-added, timely responses to their inquiries. To this end, it will

work to develop and apply new methods and technologies for increasing the quality, responsiveness, and impact of the investor relations service. The aim will be to turn a higher number of these inquiries into qualified investment intelligence upon which governments and the private sector can act. At the same time, it is hoped that a greater number of these inquiries can be converted into actual investment decisions that favour Canada.

Ensuring that investment intelligence and opportunities are disseminated to those who can best act upon them will require greater co-operation among government departments, and closer co-ordination among all levels of government and industry.

- **Accessing Strategic Financing for International Expansion** — Canadian SMEs can benefit from access to foreign sources of equity capital in order to expand their operations internationally. The Government will place increased emphasis on identifying and assisting internationally oriented Canadian SMEs seeking high-quality expansion financing opportunities from international sources. The primary objective will be to help Canadian SMEs gain access to international pools of venture capital that can help them position themselves in international markets.
- **Direct Investment Abroad** — While exports are vital to the prosperity of many Canadian firms, a growing number of companies are finding it necessary to locate additional facilities close to international customers to protect and increase their international market share. By expanding internationally, and becoming global companies, Canadian firms create additional, quality jobs here in Canada. As an extension of government programs to encourage and facilitate export growth, the Government will contribute to the global expansion of Canadian-based companies by introducing them to investment opportunities and potential partners in international markets.

## Geographic Overview

### United States

#### Introduction

The United States remains Canada's largest and most important market, absorbing more than 80 percent of our total merchandise exports. In 1993, Canadian merchandise exports to the U.S. increased by 20 percent to reach \$150 billion, representing the most important international factor sustaining economic growth and job creation in Canada. The growth in exports to the U.S. in 1993 (\$24.9 billion) was larger than total Canadian exports to all other OECD countries (\$22.6 billion). United States direct investment of \$95 billion in Canada accounts for the largest share (65 percent) of total foreign direct investment in Canada, which reached \$146 billion at the end of 1993. Similarly, Canadian direct investment of \$65 billion in the U.S. represented the largest share (60 percent) of the total \$107 billion Canadian direct investment abroad as of the end of 1993.

#### Business Environment

The U.S. market has changed considerably in recent years due to the emergence of new technologies and ongoing rationalization of the economy arising from the recession, the Canada-U.S. Free Trade Agreement (FTA), the NAFTA, the Uruguay Round and the southward movement of labour-intensive industries.

Canada's extensive trade relationship with the United States has been consolidated and strengthened with the implementation of the FTA and the NAFTA. This relationship will be further enhanced with the implementation of the WTO Agreement in January 1995. The market liberalization brought about by these agreements, combined with favourable exchange rates and ongoing recovery of the U.S. economy, provide

many new opportunities for Canadian firms, especially SMEs.

The FTA tariff reductions continuing under the NAFTA should further improve access to the U.S. market for Canadian suppliers of natural resources as well as manufactured and consumer products.

The United States will continue to be the most important market for the Canadian tourism industry. Tourists from the United States spent an estimated \$5 billion in Canada in 1993, a 9.5-percent increase over the previous year. This contributed significantly to a reduction in the Canadian travel trade deficit.

The NAFTA has continued the substantial liberalization achieved under the FTA in a number of strategic, high value-added industries, including environment, services, information technologies, medical and health care, and biotechnology. The Agreement has also improved Canadian access to U.S. federal government contracts. Canadian construction services firms can now bid on major U.S. government contracts and use Canadian building supplies while providing their services. The NAFTA will therefore expand the U.S. market for Canadian contractors, suppliers and services companies. Important opportunities exist for Canadian firms in the environmental sector, including clean-up work related to U.S. government defence and energy sites and facilities. Canadian services companies now have improved access to both public and private services markets in the United States.

The United States is Canada's primary source of foreign investment and technology. Both the FTA and the NAFTA have reinforced the already high degree of integration between the two economies.



## Market Opportunities

To capitalize on the improved business climate, the Department of Foreign Affairs and International Trade (DFAIT) has repositioned its Trade, Tourism and Investment Development Program in the United States. The program emphasizes an integrated approach to trade and investment development. It gives priority to knowledge-based and value-added activities, including generating and disseminating market information and intelligence through electronic means, promoting strategic alliances and technology inflow, and increasing the export-readiness of SMEs. The program is focussed on five priority sectors: information technologies; environmental services; health care/medical; biotechnologies; and telecommunications.

Within these sectors, U.S. export, investment or research opportunities are expected to be particularly attractive in such areas as computer hardware/software; integrated waste management; energy and air pollution control; business and professional services; pharmaceuticals; medical devices; and network, radio and telecommunications equipment.

For traditional natural resources, manufactured products and consumer goods sectors, the objective of the U.S. marketing plan is to expand the market penetration and competitiveness of these industries through participation in key trade shows and incoming and outgoing missions.

Recognizing the growing importance of services in the domestic economy and the expanding global as well as bilateral Canada-U.S. trade in services, our marketing program will continue to emphasize the promotion of Canadian services exports.

Most SMEs gain initial international experience by entering the U.S. market. An overriding objective of the Trade, Tourism and Investment Development Program is to continue to increase the participation of SMEs in a wide range of promotional activities in the United States. A key element in achieving this objective is the New

Exporters to Border States (NEBS) program. This program, which caters exclusively to SMEs, provides not only practical information on the intricacies of exporting but also first-hand exposure to the U.S. marketplace. Over the last 10 years, the program has proven its success in developing new exporters to the U.S. and, subsequently, to world markets.

The tourism marketing strategy, implemented in co-operation with Industry Canada (Tourism Canada), the provinces and private-sector partners, is to increase tourism revenues from the U.S. and to maintain Canada's share of visitors. Our program of activities is targeted to selected high-yield customers segments such as retired affluent seniors, affluent middle-aged, affluent baby boomers, associations, corporations and incentive planners.

The Investment Development Program, through specific types of activities, will continue to emphasize the promotion of alliances and teaming arrangements to help Canadian firms achieve a number of strategic objectives such as upgrading their technological capability and promoting their financial growth and capital asset strength.

We will also expand our corporate liaison program targeted at senior U.S. executives to promote Canada as a location for investment and to encourage the retention of U.S. investment in Canada. These activities are also used to promote a broad range of Canadian economic interests and to explain Canadian policies and positions on specific issues.

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## Europe

### Western Europe

#### Introduction

With 360 million consumers, Western Europe is the world's largest importer of goods and services, accounting for some 46 percent of world merchandise imports and 52 percent of world imports of business services. With the United States, it is one of the largest, richest and most sophisticated markets in the world. It is the world's leading investor, a pacesetter in scientific research and development, and Canada's most important commercial partner after the United States. Canadian exports to this region are characterized by a high percentage of high value-added goods and a large volume of business services. Seven of our first twelve merchandise export markets are within Western Europe. A market with significant potential for growth, it is also an essential market for small- and medium-sized enterprises.

In 1993, the value of Canada's merchandise exports to Western Europe totalled \$13.2 billion. While there has been a decline since 1988 in exports of certain categories of food, inedible raw materials and fabricated products, there has been a steady increase in exports of high value-added manufactured or end products (totalling \$4.3 billion in 1993), which now represents 32.5 percent of total exports compared with 27.3 percent in 1992 and 25.6 percent in 1988. From 1988 to 1993, pharmaceutical exports grew at an average annual rate of 23.6 percent, followed by printed matter (23 percent), medical equipment and supplies (14 percent), transportation equipment (13.4 percent), machinery (7.8 percent) and telecommunications and related equipment (7.6 percent).

Western Europe is also Canada's second-largest market for business services after the United States. The value of business services exported to

the region increased by 6 percent in 1992 (the latest year for which data are available), to reach a record level of \$2 billion. From 1988 to 1992, exports of such services grew at an average annual rate of 4.5 percent. Over half of Canada's 13 major services export markets are within Western Europe (the United Kingdom, Germany, France, Netherlands, Switzerland, Belgium, Italy).

Western Europe is Canada's second-largest foreign direct investor and the world's second most important destination for Canadian investments. While U.S. companies continue to account for the greatest proportion of existing foreign-owned assets, European investment has accounted for the largest share of the growth in such assets in Canada since 1985. Canadian direct investment in Western Europe grew by 168 percent between 1985 and 1992 to more than \$22 billion, while European direct investment in Canada increased by 114 percent to nearly \$38 billion.

Western Europe is a world leader in science and technology, and a key source for technology partnerships. Europe collectively accounts for about one-third of the world's R&D expenditures, and its industrial competitiveness has been significantly strengthened by its strategic use of science and technology and industrial innovation. More than 300 co-operative scientific projects are under way between Canadian and European public-funded laboratories. Scientific co-operation in the private sector, as a pre-competitive technology access tool, is also very active.

With an average growth of 3.1 percent in tourist traffic over the last five years, 1993 saw the best performance in European travel to Canada since 1988, with an increase of 8.2 percent over 1992. More than 1.8 million Europeans visited Canada in 1993, and spent an estimated \$1.5 billion. This represents the single largest growth rate of any continental market, including the U.S. and the Asia-Pacific region.

Western Europe continues to hold significant new opportunities for all Canadian companies in the short, medium and long term. The increasing

economic and political integration of Western Europe, combined with the growing economic interdependence of East and West, guarantees Europe's vital role in Canada's trade, investment, and science and technology profile.

### Business Environment

Western Europe, like North America, is gradually coming out of a recession. Four of the G-7 countries (the United Kingdom, Germany, France and Italy) are located in Western Europe. According to the OECD's GDP projections, all four economies are expected to grow between 2 percent and 3 percent in 1995. Although this growth may be smaller than that of some other markets, it represents significant additional potential for Canadian exporters because of the sheer size of these economies. For example, a 2.5-percent increase applied to the German GDP of \$2.5 trillion represents \$62.5 billion. It is expected that such growth prospects will also spill over to other Western European economies, while other emerging markets such as Turkey are expecting growth rates of 7 percent or 8 percent.

Western Europe's stable and democratic governments, market economies, high per-capita incomes, and rules-based trading systems will continue to mean lower-risk markets to potential Canadian exporters and investors, particularly SMEs. This should be further enhanced with the ratification of the WTO Agreement in January 1995 as a result of the GATT Uruguay Round negotiations.

The emergence of a confident and inward-looking European Union as a dominant political and economic player puts increased strain on the traditional Europe-Canada relationship. The central challenge for Canada is to counteract this growing Eurocentrism by strengthening its ability to influence the EU trade agenda and legislative initiatives.

The consolidation of the single market and the recent enlargement of the EU also present great challenges to Canada: tougher competition;

non-tariff barriers; and competition with Canada for foreign investment. On the other hand, the single market will promote growth and stimulate demand for imports, creating greater opportunities for Canadian business.

### Market Opportunities

Western Europe offers major market opportunities for Canadian exporters. Through an extensive program of fairs and missions, the NEXOS (New Exporters to Overseas) program, mission-initiated activities, and the tourism promotion program, it is expected that more companies will recognize this potential and act upon it. A detailed list of opportunities by country follows.

Despite a more competitive world environment, Canada continues to be an attractive investment destination for Western Europe's chief executive officers. Through such initiatives as DFAIT's Corporate Liaison Program, new investors will be identified, along with those who require assistance with their investment plans. Other activities on a regional basis include roundtables, support for incoming companies and investment missions, and the promotion of Canadian investment opportunities in Europe, in a NAFTA context, through public events and through high-profile Canadians visiting key European cities.

Strategic alliances between Canadian and Western European companies in selected high-technology areas will be continued in such value-added sectors as software, biotechnology, wastewater, lasers and opto-electronics, medical devices, food packaging, solid waste management, telecommunications, ocean technologies, geomatics, air pollution, agri-food, microelectronics and industrial automation.

Through DFAIT's Technology Inflow Program (TIP), the Government will continue to promote technology acquisition and transfer between Canadian and Western European companies, in consultation with the National Research Council of Canada. Other activities on a regional basis include support for incoming companies and



technology missions, promoting Canadian technology capabilities in Europe through public events (information booths, partnering activities), and support for incremental costs to pursue R&D projects.

**United Kingdom:** The commercial relationship with the U.K. is by almost every measure the most extensive Canada has in Europe. It is Canada's third-largest market for merchandise exports (\$2.9 billion). It is a major market for Canadian primary products and a growing market for manufactured goods and services. Canadian merchandise exports are shifting steadily to value-added products and to services, whose combined ratio to total exports has grown in 10 years from 20 percent in 1983 to 40 percent in 1993. When tourism services are added to business services, this ratio climbs from 27 percent in 1983 to 49 percent in 1993.

Sectors offering excellent opportunities include transportation, defence, informatics and telecommunications, forestry, grains and oilseeds, construction, fisheries, environment, health care, general machinery and equipment.

**Germany:** This is the largest economy in Western Europe with a population of 80 million and a GDP of \$2.5 trillion. It ranked as the fourth most important export destination of Canadian goods in 1993 (\$2.5 billion). The market offers a highly sophisticated financial and communications infrastructure. Transportation facilities are excellent and professional services are widely available. German companies favour long-term strategies and market share over short-term profits. They look for partners and suppliers who are committed to staying in the market through good and bad times. Consumers are not reluctant to buy from foreign suppliers, but there is a strong preference to buy from companies established in Germany, particularly in the service industry.

Sectors offering excellent opportunities include computers, telecommunications equipment, housing, agri-food, environment, automotive,

geomatics, wood products, machinery, aerospace, security, tourism, medical products and devices, and farm equipment.

**The Benelux Countries (Belgium, Netherlands and Luxembourg):** With two-way trade totalling \$3.6 billion and Canadian exports amounting to \$2.4 billion in 1993 (\$1.3 billion to the Netherlands and \$1 billion to Belgium, Canada's seventh- and ninth-largest export markets respectively), the Benelux region is Canada's third-largest export market in Europe and fifth-largest in the world. An extremely important source of investment, technology and strategic alliance partners, the area is also considered particularly attractive as entry points for penetrating European Union markets, as evidenced by the approximately 150 Canadian firms established there.

More than half our merchandise exports to this region consist of fabricated materials such as wood, paper, metals, chemicals and textiles. There are good market opportunities for finished products such as pharmaceuticals, medical equipment and supplies, telecommunications and related equipment, industrial machinery, transportation equipment, industrial instrumentation, office equipment, and a variety of consumer products, including sports and recreational goods. Other sectors of opportunity include defence, civilian security, environmental technologies, consumer software and business services.

**France:** With a population of 57.7 million and predicted GDP growth of 3 percent in 1995, France plays a key role in the European economy. Given the potential of both partners, current levels of trade are modest (France is Canada's eighth-largest market for merchandise exports \$1.3 billion in 1993). The value of finished products exported to France has doubled in five years, with major sales in the aviation/aerospace sector.

The following sectors have been identified as areas of commercial opportunity: aerospace and defence; agri-food; automotive parts; biotechnologies; cable broadcasting networks;

chemical products; consumer products; electrical equipment; environmental technologies; fishery products; forestry products; information technologies/computers; medical equipment; ocean industries; packaging; retail distribution; telecommunications; tourism; and transportation equipment.

**Italy, Austria and Switzerland:** Italy offers tremendous potential for Canadian commercial interests. While it is the fifth-largest world economy, it ranked only as Canada's eleventh-largest export market (\$969 million) in 1993. The Government has undertaken an aggressive privatization plan of state-owned enterprises and conglomerates, which heightens Italy's attractiveness to Canadian business. There are advantages to linking with Italian firms to penetrate Italy's highly industrialized market and secure a long-term presence. Moreover, Italy is a potential gateway to Eastern Europe and the Mediterranean countries. Excellent opportunities exist in the following sectors: transportation; telecommunications equipment and services; computer software; environmental equipment and services; cereals and feed grains; forestry; and high-value fish products.

Switzerland is the twelfth-largest export market for Canada, valued in 1993 at \$954 million. Imports accounted for \$651 million for a two-way trade total of \$1.6 billion. Canada is the second most favoured overseas destination for Swiss tourists, who spent \$97 million in Canada in 1992. With a population of 7 million and an anticipated GDP growth of 2.5 percent in 1995, Switzerland is a good country in which to do business. Major opportunities exist in the following sectors: environment; health-care products; information technology; sporting goods; and tourism.

Austria is a small prosperous country that offers good potential for Canadian business interests. In 1993, Canadian exports to Austria were \$144.3 million. Manufactured products represent approximately two-thirds of Canadian

exports. Austria joined the European Union in January 1995. This will enhance its favourable position as a source of project and trading partnerships for new business in countries of both Eastern and Western Europe. Major opportunities for Canadian exports, joint ventures and technology transfer exist in the following sectors: aerospace; automotive; forestry; informatics and telecommunications; environmental products and services; and agri-food.

**Scandinavian Countries:** At \$3.3 billion, the level of our two-way trade with the Nordic countries is close to the level of our trade with France. Canadian exports to the Nordic countries amounted to \$986.4 million in 1993. Nordic countries' investments in Canada are quite extensive, with Sweden leading the way with both direct investment (in excess of \$1 billion) and corporate presence (close to 140 companies have subsidiaries in Canada). With Sweden and Finland joining the European Union on January 1, 1995, integration with the EU will be complete. The Nordic countries, with a combined GDP of \$591 billion, have more commercial importance than their total population of 23 million would suggest. While the recession caused a decline in trade in most Scandinavian economies in the last few years, economies in the region are bouncing back.

The following sectors have been identified as offering excellent opportunities: oil and gas; computers; telecommunications equipment; agri-food; environment; fisheries; forestry; transportation; health care; and sporting equipment.

**Iberian Peninsula (Spain and Portugal):** Spain is the world's tenth-largest importer (\$125 billion in 1993) and Canada's twenty-second export market (\$384 million in 1993). Canadian commercial activities in Spain centre on the export of raw materials such as mining commodities, pulp and paper, mineral fuels, wood and fishery products. To improve our share of the Spanish market, Canadian companies must be active in

carving out a specialty niche, bearing in mind competition from other EU members. Major opportunities exist in the following sectors: environmental products and services; transportation; telecommunications; mechanical and electrical equipment; mineral fuels and oils; construction; and business services.

Since Portugal became a member of the EU in 1986, the composition of its international trade has shifted dramatically. While prior to 1986, approximately 75 percent of Portugal's imports came from outside the EU, today the same percentage comes from within. As well, 75 percent of Portugal's exports are now destined for the European Union. Our two-way trade amounted to \$282 million in 1993, with Canada's exports totalling \$103 million. Portugal's economy has recently undergone a radical transformation leading to a surge in wealth, as demonstrated by a US\$10 000 increase in per-capita GDP from the 1985 level of US\$2000. This new wealth offers opportunities for Canadians to diversify their exports from resource-based commodities to value-added goods. Canadian environmental technologies, multimedia and information technologies, as well as wood frame housing techniques, are excellent niche opportunities in the Portuguese market.

**Greece and Turkey:** Notwithstanding its current economic difficulties, Greece will offer opportunities for sales growth in 1995. Two-way trade in 1993 was \$162 million, with Canadian exports totalling \$103 million. Greece will be the recipient of a

substantial sum of money — about \$13 billion — under the EU's Delor 11 program. This will be dedicated to a large number of infrastructure projects in the transportation, telecommunications and environmental fields. Other opportunities exist in forestry, agri-food, consumer products, machinery and equipment, and defence.

Turkey's economy continued to show very strong growth in 1993 with an annual increase in GDP in the range of 7 percent to 8 percent, the best growth performance of any OECD country. This growth should be maintained in 1995. Two-way trade in 1993 was \$242 million, with Canadian exports accounting for \$160 million. Canadian exports of services were boosted by the commencement of the Ankara Metro Project in March 1993, which generated some \$200 million in engineering services that year. Major opportunities exist in the following sectors: agri-food; construction; defence; power and energy; and environment.

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# Central and Eastern Europe

## Central Europe

### Introduction

The territory of Central Europe includes the Czech Republic, Poland, Slovakia, Romania, Moldova, Hungary, Slovenia, Croatia, Albania, Bulgaria, Bosnia-Herzegovina, the former Yugoslavian Republic of Macedonia and Yugoslavia/Serbia Montenegro. The region has a population of approximately 120 million. Canadian exports to Central Europe reached \$233 million in 1993, a 7-percent increase over 1992. Priority countries for Canada in the region are the Czech Republic (population 10 million), Poland (38 million) and Hungary (10 million).

### Business Environment

The transition from former communist-controlled command economies to new free market economies is a major challenge in the region. Certain countries are more advanced than others, and privatization programs are evolving rapidly, creating opportunities for Canadian businesses and investors whether through projects funded by the World Bank, IMF or EBRD, greenfield activities or joint ventures.

Debt reduction has become the main goal as Central Europe adapts to free market economy operations allowing bilateral financing arrangements to be put in place. The Czech Republic's repayment of its entire IMF debt is particularly noteworthy. Canadian lines of credit are now becoming available to assist exporters in countries that have made the most progress. Most currencies are non-convertible, although many countries in the region are moving toward making their currencies convertible in the near future.

The countries of Central Europe are gradually moving toward joining the European Union, with

the Czech Republic, Poland and Hungary at the forefront. All countries in the region are beginning to adjust their legislation and trade policies to be compatible with Western democracies. Concerns relate to the protectionist trade policies, high tax rates and entrenched bureaucracies that still exist. Membership or association with multilateral organizations such as the GATT, the IMF, the World Bank, the OECD and NATO, and agreements on special tariff status, double taxation, investment and insurance, are actively sought by countries in the region. Hungary has been a member of the GATT since 1973.

As countries in the region move toward free market economies, the market and investment opportunities for Canadian businesses should be very positive.

**Hungary:** The sectors currently offering the best commercial prospects for Canadian companies in Hungary include services; transportation; construction; energy; environment; tourism development; and infrastructure development. Many investment opportunities also exist in the Hungarian economy, whether greenfield or joint venture.

Additional opportunities exist for exports within the framework of multilateral bank projects (World Bank, EBRD), government privatization programs, and in the area of municipal affairs. Others may be found in agriculture, training, distribution and retailing, commercial legal services, health care and administration, and cultural industries.

**Poland:** The main opportunities for Canada in Poland are currently found in construction, telecommunications, informatics, geomatics, agriculture and food processing and environmental goods and services. Poland also offers opportunities in forthcoming World Bank projects in forestry, energy, telecommunications, steel, health care and rail equipment. In addition, there will likely be increased demand for pharmaceutical products in the years ahead.



**Czech Republic:** Numerous opportunities exist throughout the Czech Republic both for Canadian business expertise and Canadian technology. In chemical and metallurgy-related industries, for example, projects are either under way or are being developed with the goal of modernizing existing plants and researching and/or developing new chemical preparations, including organic plants, epoxy resins, surface finishes, preparations for veterinary and human medicines, synthetic lubricants, and cement. Canadian expertise may also be required in the ongoing transformation of the food industry from large-scale enterprises toward small- and medium-sized plants, which involves, among other things, the modernization of processing equipment and the need for modern packaging and labelling technology. In the textiles and garment manufacturing fields, the relatively low wages and high level of craftsmanship found in the Czech Republic may provide the foundation for promising partnerships with Canadian and other foreign companies active in this field. Similar conditions exist in the leather and footwear sectors.

In the field of wood processing, opportunities are arising from the need to manage the exploitation of available domestic raw materials, as well as the introduction of new products such as recycled paper, thermal insulation panels and multi-layered cardboard. In the agricultural sector, there is a considerable need for modern technology and expertise in the wake of large-scale privatization over the last year. The construction and telecommunications sectors are also promising.

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## Eastern Europe

### Introduction

The region includes the countries of Russia, Ukraine, the Baltics (Latvia, Lithuania, Estonia), Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, Kyrgyz Republic, Georgia, Armenia, Azerbaijan and Belarus. The population of the region is approximately 285 million and the priority countries for Canada in the region are Russia (population 148 million), Ukraine (51 million) and Kazakhstan (17 million). In 1993, Russia was Canada's twentieth-largest market for exports, totalling \$464 million.

### Business Environment

Two-way trade between Canada and Russia in 1993 amounted to almost \$1 billion, with Canada enjoying a small surplus. The recent events in the break up of the former Soviet Union (FSU), the coming of the market economy and the change-over from central planning to free markets has resulted in a breakdown of the old social structures. In spite of the difficulties, over the long term Russia will remain a major economic and political power in the region. The FSU market comprises over one-half billion people; Russia's natural resources are immense and its industrial base is established. The task is to find a way to enter the market while controlling the economic and political risks of doing business. There is a great deal of poverty, social dislocation and fear for the future. As a result, crime and corruption are major problems.

The markets in this region must be approached with a great deal of preparation. Market research, legal, auditing and other Western business support services are now available in Moscow and some regional capitals. However, local authorities are demanding a piece of the action and asserting their decision-making, taxation, and territorial ownership rights. The business person must deal with them, as well as regulators, tax officials and import/export bureaucracies. There is a slowness

evident in implementing new laws and a lack of transparency. Nevertheless, the transition from a command economy to the new market economy has started. DFAIT's Renaissance Program for Eastern Europe assists the setting up of joint ventures, and can share the Canadian private sector's costs in determining the feasibility of entering the market.

**Russian Federation:** Export opportunities exist in a number of sectors, including:

- **Oil and Gas:** This sector probably provides the best opportunities for Canadian firms. The Russian oil and gas sector needs Western exploration and production companies, well make-over firms and suppliers of oilfield equipment, services and technology to stem its nearly 50 percent production decline since 1989.
- **Mining and Metallurgy:** Many Russian mines are unsafe and inefficient, and in many instances, antiquated equipment is still in use. There is considerable potential for sales of Canadian expertise, technology and equipment in mining, especially in the coal mining sector. Similarly, blast furnaces at Russian steelworks often date from the 1930s, so there is scope for sales of both metallurgical equipment and services for Canadian suppliers.
- **Forestry and Forest Products:** Opportunities exist for sales of equipment, technology and services, and for licensing agreements for the technology to manufacture equipment.
- **Construction:** With the return of some 750 000 military personnel from Central and Eastern Europe, the Russian Federation is facing a severe housing shortage. A considerable need exists for construction equipment, building materials, technology and services, and related training.
- **Telecommunications:** Russia's telephone system needs to be modernized. There are therefore important opportunities in the area of telecommunications products, technologies and services.

**Ukraine:** Canadian export opportunities in Ukraine exist in several sectors, including agriculture and food processing, energy, mines, metals, mineral products and services, pharmaceuticals, medical and health-care products and services, telecommunications and electronics, construction and environment. Canada has initialled a double taxation agreement with Ukraine, and signed a foreign investment protection agreement and an economic co-operation agreement. A line of credit for \$20 million (non-concessional) for capital and quasi-capital goods and services is being provided to Ukraine through the Export Development Corporation.

**Kazakhstan:** The following sectors currently offer the greatest prospects for Canadian companies in Kazakhstan: oil and gas exploration and production; mining and metallurgy; agri-food production, storage and processing (including farm machinery); transportation, distribution and other services; construction and building materials; telecommunications; tourism; business and professional services; and environmental protection.

Additional opportunities for Canadian firms arise from the conversion and/or diversification of defence industry facilities to high technology or other civil production, together with housing construction and municipal planning and services, rehabilitation of existing industrial facilities, computer informatics, medical device manufacturing, consumer goods production (such as footwear) and retail distribution.

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## Latin America and the Caribbean

### Introduction

The Latin America and Caribbean region represents an aggregate GDP of about \$1.3 trillion. In recent years, the economy of the region has experienced the world's second-highest growth rate, after Asia-Pacific. In terms of political stability, all countries (with the exception of Cuba) have democratic governments — a sharp contrast to the situation that prevailed in 1980.

Economic and market liberalization has been the basis of economic policy in the region. This process, led by Mexico and Chile (and now including almost all countries in the region) has led to substantial lowering and removal of both tariff and non-tariff barriers, massive privatization programs, and a more friendly foreign investment and intellectual property environment. Most countries within the region are committed to the principle of hemispheric trade integration, preferably through a broader NAFTA, although regional groupings (Mercosur, G-3, Andean Pact, CARICOM, etc.) are also emerging. These commitments have translated into concrete actions, particularly in the case of the Mercosur. Canadian exports to the region in 1993 totalled \$3.5 billion, an increase of 5 percent over 1992. About 58 percent of Canadian exports were made up of fabricated goods or end products.

### Business Environment

The biggest trade policy challenge is to maintain the momentum of NAFTA accession in view of the fact that the U.S. Congress has not renewed "fast track" authority for trade negotiations. If a broader NAFTA is not achieved, there could be a proliferation of bilateral and subregional agreements, each with a separate set of trade rules — a situation that would make it increasingly difficult to conduct business.

Although the Uruguay Round has resolved many market access issues in the region, several irritants remain. The issue of export subsidies for agricultural products, particularly grains, has yet to be resolved and could have a major negative impact on Canadian exports. Canada is also trying to resolve, through bilateral negotiations, access issues for products such as seed potatoes (Mexico, Venezuela, Dominican Republic) and pork (Argentina). Customs delays in Mexico and other countries are also of growing concern.

Availability of medium- to long-term export financing remains a problem with several countries in the region (e.g. Central American countries, Cuba, Venezuela, Brazil, Peru) and innovative mechanisms are often needed to assist in financing Canadian exports of capital goods.

### Market Opportunities

The Government will focus on opportunities arising from market liberalization and economic expansion in key sectors of Canadian technological expertise. Given the nature of the changing economies in the region, a shift from straight exports to exports that lead to technology transfer, joint ventures and direct investment are becoming the norm. An underlying objective is to continue the shift from resource-based exports toward higher value-added manufactured products. Priority sectors for the region include:

- **Mexico:** mining, energy, oil and gas, energy, electricity, manufacturing technology, agri-food industries.
- **South America:** energy, oil and gas, environmental industries, agri-food industries, telecommunications, informatics, mining, forestry, manufacturing technology, transportation.
- **Central America:** telecommunications, health services products, informatics, consulting services, agri-food industries.
- **Caribbean:** tourism industry products and services, environmental industries, oil and gas (Cuba), mining (Cuba), agri-food industries.

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## Asia-Pacific

The Asia-Pacific region offers some of the fastest-growing markets in the world. These markets are as varied and different as the region, presenting opportunities to almost every sector of Canadian business expertise.

The markets of Asia-Pacific are not without their challenges, including language, culture and different business methods. However, these are compensated for by the dynamism, innovation and absorptive capacity of Asia-Pacific societies. From the economic giants of China and India, to the "Tigers" of Korea and Thailand and the touchstone Asia-Pacific economies of Japan, Australia and New Zealand, this region holds the key to world economic growth. Binding this economic colossus together are multilateral mechanisms, including the Asia-Pacific Economic Co-operation forum (APEC) and subregional groupings such as the Association of Southeast Asian Nations (ASEAN).

In 1993, Canadian merchandise exports to the region totalled almost \$19 billion. The recent conclusion of over \$8 billion in contracts with China is but one indicator of even higher results in 1994 and for the future.

## Japan

### Introduction

Japan is Canada's third largest trading partner, after the United States and the European Union. The overall trading relationship is generally harmonious. The volume of trade has more than doubled since 1985, and is increasingly diversified in its composition.

In 1993, Canada's exports to Japan amounted to \$8.4 billion, an increase of \$1 billion from 1992, almost matching the peak reached in 1989. Canadian imports from Japan stayed constant at \$10.7 billion, leaving a deficit of \$2.3 billion.



Total trade in the first half of 1994 continued at about the same level, with a slight increase in imports.

### **Business Environment**

Canada's exports to Japan dropped by over \$1 billion in 1991 and recovered only slightly in 1992. In 1993, however, we regained \$1 billion and more. Fluctuating commodity prices are a major factor in year-to-year figures. In the longer term, however, we are seeing major growth in Japan's imports of value-added products, while imports of basic resource materials are remaining flat or decreasing.

Canadian companies that have seized this trend are experiencing real success in the Japanese market for specialized manufactured goods and services. More firms should appreciate Japan's long-term strategic importance and follow suit.

By responding to Japan's evolving economy, Canadian business can take advantage of emerging market opportunities and adapt to Japan's changing import needs. Participation in the growth segments of the market will ultimately position Canadians for business opportunities in Asia-Pacific and other world markets.

### **Market Opportunities**

Canada's Action Plan for Japan, launched in May 1993, is a co-operative venture to tailor government's role as the provider of services and information in support of private-sector efforts to develop and grow business with Japan. An analysis of the Japanese market and Canadian industrial capabilities established seven priority sectors: building products; fish products; processed food; auto parts; aerospace; information technology; and tourism.

The plan's major focus is on business-led development of strategic sectoral action plans that will position Canadian products in the changing Japanese market. The three key objectives of the plan are to:

- increase awareness of Japan's changing market dynamics;
- adapt products to these changes;
- respond to the marketing challenges of these changes in Japan.

A co-operative team approach is critical to the plan's success. Industry groups (one for each priority sector) take the lead. In some cases, these are coalitions of industry associations; in others, private-sector groups have come together specifically to tackle the Japanese market. Government teams from both the federal and provincial levels support these groups, as appropriate for each sector.

These are not advisory bodies. The idea is to take advantage of the synergies of a "Team Canada" approach in penetrating the Japanese market. Governments stand ready to support activities to make industry more export-ready and to deliver better strategic and market intelligence. They can help to adapt products, to acquire technology, to seek partners or to establish an industry presence in the market — on a collaborative, partnership and cost-shared basis.

As our trading relationship develops with Japan, the potential for Japanese investment in Canadian businesses and for Canadian investment in Japan increases dramatically, since sustained trading relationships are often a necessary precursor to the development of investment relationships. If one includes in the definition of investment, strategic alliances, exchange of technology, licensing and joint ventures in marketing and distribution, then there is potential for investment in both directions in all action plan sectors.

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## China and Hong Kong

### Introduction

The Chinese economic area, which includes Hong Kong, is the most dynamic in the world today. Although the recent high annual growth rates of 12 percent to 13 percent are likely to slow in the year ahead, the prospects for sustained growth for the latter half of the decade appear good. The World Bank, using the standard of relative purchasing power, assessed China to be the world's third-largest economy. In more quantifiable terms, China conducted a record US\$196 billion of trade with foreign partners in 1993, recording a US\$6-billion deficit.

The expansion of our economic relations with China is a priority, as witnessed by Prime Minister Chrétien's November 1994 "Team Canada" visit. The Department of Foreign Affairs and International Trade also reorganized its China trade program in 1993-94, integrating more closely the business development activities of our missions in Beijing, Shanghai and Hong Kong, and opening a new trade office in Guangzhou.

Although China is currently our fifth-largest trading partner, exports in 1993 were only \$1.5 billion, down from 1992's record high of \$2.1 billion. The prospects for an early increase in exports appear good, however, as China's appetite for high valued-added Canadian manufactured goods and agricultural commodities continues to increase. In view of ongoing uncertainty on the political scene, however, it is important to be cautious (i.e. to consider both commercial risks and country risks when making investment decisions).

The importance of Hong Kong as a player in Canada-China economic relations, and as an important market in its own right, is difficult to overstate. It remains the primary financier of China's economic development and the gateway to the lucrative South China market, the most dynamic regional economy in Asia. Hong Kong is also the home of the largest Canadian commercial presence in Asia.

### Business Environment

China has been uniquely successful in overcoming the legacy of 30 years of central planning. In 1993, over 50 percent of China's total economic output was generated by non-state-controlled economic entities. Additionally, state-run enterprises are increasingly obliged to operate on a corporate, profit-oriented basis. Individual entrepreneurship has reasserted itself strongly, and is even evident in the government bureaucracy.

Doing business in China on an individual scale is much like doing business elsewhere; good price, product quality and supplier reliability are all essential to commercial success. The market is extremely competitive, especially in all matters related to price and financing. Moreover, Chinese partners greatly value personal contact in business dealings. Success invariably requires persistence, patience, a sustained presence on the ground, and a price-competitive product.

China's regulatory regime, especially in sensitive sectors such as telecommunications, remains strongly influenced by its socialist past. The approval process for any medium- to large-scale project (i.e. less than \$10 million) is cumbersome, slow and prone to abuse. The move toward economic decentralization, however, is making doing business on a larger scale generally easier than in the past.

To help overcome the bureaucratic obstacles and uncertainties connected to doing business in China's still opaque market, Canada has made the negotiation of China's entry into the new WTO a priority. Our negotiating priorities cover important sectors of Canadian strength, in both the goods and services sectors, for which Canada requires improved and more predictable access. It is China's stated desire to enter the WTO as a founding member in 1995. The negotiation process necessary to bring this about, however, remains difficult.

## Market Opportunities

China is really a collection of regional markets, with differing development priorities and economic characteristics. The single richest regional market remains the South China coastal provinces of Guangdong and Fujian, adjoining Hong Kong. Guangdong alone accounts for 40 percent of China's foreign trade capacity, and consumes a disproportionate amount of high value-added imported goods. Other potentially lucrative regional markets in China include the Northeast provinces, Shanghai and the densely populated Yangtse River basin, including Sichuan province.

China's development needs are well matched by Canadian capabilities. Our sectoral priorities for China and Hong Kong include:

- **Energy:** thermal, hydro and nuclear power generation equipment and services.
- **Minerals:** including oil and gas, equipment and services.
- **Telecommunications:** all aspects, including equipment sales, services, space-related telecommunications, data communications.
- **Transportation:** including automotive, aviation and rail.
- **Environment:** technologies and services.
- **Agri-food:** including livestock, agricultural commodities, value-added processed foodstuffs, and fish.
- **Urban Management:** including traffic control, solid waste disposal, law and order, education and welfare.

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## Korea and East Asia

### Introduction

Composed of South Korea, Taiwan and Indochina, the Korea and East Asia region is one of the fastest-growing economic areas in the world. South Korea, Canada's fifth-largest trading partner, receives the lion's share of Canadian exports to this region, with two-way trade totalling \$3.9 billion.

Developments in the region, specifically with respect to the emergence of Korea and Taiwan as industrialized, developed nations, have necessitated a rethinking and reorganization of Canadian objectives and strategy, which have kept abreast of these developments.

### Business Environment

The business climate is excellent for Canadian companies as Korea and Taiwan open markets and mature economically. There is still much progress to be made, however, especially in the Korean agriculture and food sector. The election of Kim Young Sam as President of Korea in 1993 is a promising development. A five-year economic plan encompassing a host of reforms aimed at reducing government interference in the economy has been introduced.

Taiwan's economy is forecast to grow by between 6 percent and 7 percent per annum for the next three years. The primary engine of growth is proving to be the \$250-billion Six-Year National Development Plan. There are currently 35 Canadian companies pursuing 56 projects worth over \$5 billion in Taiwan.

In Korea and Taiwan, there are prevailing moods of having "arrived" as economies. As evidence of this new-found prosperity, both Taiwan and Korea are now among the leading investors in Asia, particularly in Viet Nam and China. Only a generation ago, they were the recipients of aid from developed Western nations. Naturally, with more disposable income and more

leisure time, Korean and Taiwanese consumers are demanding a better quality of life, resulting in increased demand for consumer products and services.

Viet Nam, however, is in a different category altogether; it is a country that has just recently taken the first steps toward development. The recent end of the U.S. trade embargo on Viet Nam, the release of the first tranche of World Bank and Asian Development Bank financing for infrastructure and the announcement by the Vietnamese government of the need for \$9 billion in foreign investment for infrastructure development has created a heady, gold-rush atmosphere, with the lure of great profits. Coupled with the state-sanctioned doctrine of “Doi Moi” (renovation) and the easing of business regulations, there is indeed great potential for Canadian companies in Viet Nam. Yet these recent developments must be tempered by reality. Viet Nam is still very much a socialist state. Its bureaucracy is burdensome, its people largely unfamiliar with accepted business practices, and despite all of the recent attention, the current state of Viet Nam’s infrastructure is not capable of sustaining large-scale economic activity.

## Market Opportunities

Canada maintains a good trade relationship with the region. There is, nevertheless, further potential to expand our market shares in a variety of well-targeted industries.

Canada and Korea are in the process of developing a special partnership, with the idea first broached at the 1993 APEC Summit attended by Prime Minister Chrétien and President Kim Young Sam, and followed up by Minister for International Trade Roy MacLaren in Seoul in April 1994. In view of our mutual importance to one another as middle powers in the Asia-Pacific region, our trade mission revolves around the “Korea Strategy.” It is composed of the following five objectives:

- increase trade in manufactured and high-technology products;
- expand our agriculture-food exports through continued pressure on Korea to address market access issues and shift priority to processed/value-added goods;
- increase two-way investment;
- promote co-operation/partnerships between Canadian and Korean firms pursuing third-market opportunities;
- establish stronger long-term commercial links in newly emerging service and technology sectors.

Due to the massive scale of Taiwan’s Six-Year National Development Plan, there are abundant market opportunities within the infrastructure (building materials, construction, engineering and consulting industries) sector. There has recently been, however, a fresh boom in demand for consumer products, including imported durables. As well, the rising cost of labour and appreciating currency prices are forcing Taiwanese industry to rationalize and improve production automation and quality to remain globally competitive. Thus, there is significant potential in advanced equipment technologies, environmental goods and services and engineering consulting services.

Tourism is also a high-growth industry for both Taiwan and Korea, with spectacular growth in the order of 30 percent for Taiwan, and more than 100 percent for Korea over the previous year. Canadian Airlines International is expanding its service to Taiwan to keep up with the demand, while the dramatic increase in traffic between Korea and Canada can be attributed to Air Canada’s new routes to Korea.

Canada’s current top three export sectors to Viet Nam based on actual export sales are: agriculture-food, health care, and general machinery and equipment. There is considerable growth potential in these sectors as well as in oil and gas, transportation and telecommunications and informatics.



The major potential market sectors by country are:

- **Korea:** transportation (specifically aerospace, as Korea will soon upgrade air traffic control and airport facilities); power and energy (e.g. CANDU-related equipment and support, electrical transmission and distribution); environmental technologies, equipment and consulting services; tourism; value-added food products (e.g. processed goods).
- **Taiwan:** infrastructure-related industries (construction, building and construction materials, engineering and consulting services); advanced equipment sales (plant automation machinery, components and consulting services); environmental technologies, equipment and consulting services (pollution control and abatement issues are rising to the top of government agendas, drawing increased legislation and funding); legal reform; tourism.
- **Viet Nam:** infrastructure-related industries (construction, engineering and consulting services); transportation (vessel traffic management systems, air traffic control and broad construction); agriculture-food (high-quality livestock and food-processing equipment); telecommunications and informatics (digital-switching equipment, rural telecommunications and multiplexing systems); oil and gas exploration and development (recovery and distribution technology, equipment and expertise).

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## South Asia

### Introduction

In 1993, Canada's merchandise exports to South Asia totalled \$400 million. South Asia has not been a traditional Asia-Pacific market for Canadian goods, services and investment. This is rapidly changing as the countries of South Asia turn away from inward-looking economic policies, open their markets to free competition, and seek to become more engaged with the world economy.

### Business Environment

Canadian commercial interest in South Asia has grown exponentially over the past five years. This interest is beginning to be translated into actual business contracts, especially in India. Canada's currency in the region is well founded on development assistance, co-operation through the Commonwealth and the United Nations, and strong human bonds through emigration of large numbers of South Asians to Canada. The fact that the countries of South Asia are English-speaking, democratic and familiar with market structures enhances the business environment.

The financial sector is well developed in South Asia, and the Export Development Corporation has an increased interest in the region. International financial institutions are active in the region, including the World Bank and the ADB. Their activities enhance the business environment, especially in countries such as Bangladesh. Aid-related trade prospects exist in most countries.

### Market Opportunities

Canada is recognized in South Asia as a well-developed country, capable of supplying sophisticated, quality goods and services. Beyond this, the countries of South Asia see particular advantages in pursuing partnerships, joint ventures and licensing agreements with Canadian firms. The acquisition and application of higher technology are of special interest.

The major sectors of opportunity throughout the region include power generation, oil and gas development, environmental services and goods, telecommunications and agriculture. Opportunities also exist in the field of education and training.

There is a market for services in South Asia. This includes consulting engineering, geomatics, the environment, and general management services. Investment in the various sectors, including telecommunications, mining and food products is growing, while investment in other sectors, such as insurance, is emerging.

The major potential market sectors by country are:

- **India:** By far the largest market in the region, there is enormous scope for commercial co-operation. Power and energy, environmental products and services, aviation, agri-food and telecommunications are the key sectors, but there are opportunities in virtually all sectors, especially under the reform and liberalization policies of the Rao/Singh regime.
- **Pakistan:** telecommunications equipment and information technologies, agri-food, power and energy, metals and minerals.
- **Sri Lanka:** power and energy, telecommunications, food and beverages, specialized building materials.
- **Bangladesh:** power and energy, oilseeds and wheat, telecommunications.

## Contact

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Ottawa K1A 0G2  
Tel.: (613) 996-1989  
Fax: (613) 996-5897

## Southeast Asia/ASEAN

### Introduction

Within the dynamic Asia-Pacific region, the Association of Southeast Asian Nations (ASEAN) is gaining in commercial importance.

ASEAN was formed in 1967 and includes six member countries: Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand. ASEAN countries have forged economic, political and cultural ties among themselves and with the international community. Their market-oriented economies are open, dynamic and increasingly prosperous. Over the past decade, the rate of economic growth in ASEAN countries has been among the highest in the world.

Rich in natural resources, the ASEAN region accounts for much of the world's output of rubber, palm oil, tin, copra, copper, sugar, coffee, timber, tropical fruits, liquefied natural gas (LNG) and minerals. The region has also become a market leader in manufactured exports of garments and textiles, electronics and consumer goods.

### Business Environment

Canada's economic and commercial relationship with ASEAN as a region is expanding. The dynamic growth and diversification of the economies of the ASEAN member countries offer excellent opportunities for Canadians.

Bilateral trade between Canada and the ASEAN region reached a high of \$4.78 billion in 1993. The total dollar value of trade has increased by 50 percent in the past five years, and almost quadrupled over the past decade. In spite of this increase in total trade, Canadian exports to ASEAN markets in 1993 at \$1.5 billion, remained the same as 1992 levels. At the same time, Canadian imports from the ASEAN region at \$3.26 billion increased by over \$750 million, leaving Canada with a \$1.75-billion deficit in its ASEAN trade.

Within ASEAN, Indonesia represents Canada's largest export market, followed closely by Thailand, Singapore and Malaysia. These four markets account for about 87 percent of Canadian exports to the region. The Philippines receives approximately 12 percent of Canada's exports to the ASEAN region.

Canada receives close to 2 percent of its imports from the ASEAN region. In 1993, import levels were at \$3.26 billion. Principal imports from the ASEAN region consisted of electrical, electronic and mechanical equipment and parts, articles of apparel, prepared fish and meat, and rubber.

Despite the growth in trade, ASEAN and Canadian exports account for less than 2 percent of each other's markets. There is tremendous potential for future growth in the ASEAN-Canada trading relationship, with much in common between Canadian consulting skills and strength in manufacturing sectors such as telecommunications, transportation and energy, and ASEAN development and investment needs.

There are no major trade barriers or impediments to exporting to ASEAN countries, but some products in the defence and high-technology sectors are subject to export permits. The requirement for export permits in the sale of defence products applies especially to Indonesia.

### Market Opportunities

Specific priority sectors for 1995-96 for each country are:

- **Brunei:** oil and gas exploration and processing equipment and services, telecommunications equipment and services, power equipment and services.
- **Indonesia:** power equipment and services, information technology, environmental equipment and services, forestry products, mining equipment and services, construction equipment and services.
- **Malaysia:** oil and gas equipment and services, transportation equipment and services, advanced technology, power and energy equipment and services, agricultural and food products.
- **Philippines:** advanced technology, power equipment and services, mining equipment and services, grains and oilseeds, agricultural and food products, environmental products and services.
- **Singapore:** informatics and telecommunications, construction, defence, agricultural and food products, transportation, oil and gas services, environmental products and services.
- **Thailand:** information technology, power and energy equipment and services; transportation equipment and services, agricultural and food products, environmental products and services.

### Contact

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## South Pacific

### Australia

#### Introduction

Australia is our fourteenth-largest market, and is among Canada's most important markets for manufactured goods. In fact, more than three-quarters of our exports are manufactured goods and end products, often exported by small- and medium-sized companies. After two consecutive years of major declines, exports rebounded slightly in 1992 and continued to increase in 1993, exceeding \$800 million, according to Statistics Canada. The actual level of exports, due to trans-shipments, is more likely to be in excess of \$1 billion, according to Australian import figures.

#### Business Environment

There is a natural affinity between Canada and Australia, the result of a shared Commonwealth heritage, a common language, similar legal and regulatory systems, and a mutually satisfactory trading relationship pre-dating the arrival of John Larke, Canada's first Trade Commissioner, in Sydney in 1895. In addition, the preferential tariff rates accorded to approximately 17 percent of Canadian exports under the Canada-Australia Trade Agreement (CATA) offer advantages to some Canadian producers. More recently, Australia has embarked on a unilateral tariff reduction program that will see most tariffs eliminated or reduced to 5 percent by 1996. Textiles, clothing and footwear tariffs are also scheduled for reduction, but on a more modest basis, with the effective rates targeted for 15 percent.

Australian investment in Canada to the end of 1993 was approximately A\$1.7 billion or a meagre 1 percent of total Australian investment abroad. This investment is largely attributable to several high-profile acquisitions such as Elders IXL's purchase of 50 percent of Molsons, Teck Corporation's purchase of 31 percent of Cominco from CP Ltd., and Giant Resources acquisition of

control of Giant Yellowknife Mines, the Bell Creek mine, the ERG Resources tailings treatment operation in Timmins and the Curragh Resources lead and zinc mine in Faro, Yukon.

Many Canadian companies have established a direct presence in Australia through investment, joint ventures, sales offices or licensing agreements. The similar size and technology levels of the two economies contribute to the formation of technology transfers and joint ventures. Canadian investment in Australia is approximately \$3.7 billion (2 percent of total foreign investment) and is characterized by numerous, small-scale operations. A notable exception is the recent acquisition of the Fairfax Group by a consortium led by Conrad Black. Other Canadian firms with Australian operations include Alcan, Northern Telecom, Moore Corporation, Placer Development, Norcen and McCains.

#### Market Opportunities

- **Agri-food:** Canadian agri-food exports in 1993 were valued at approximately \$70 million. There is good potential for highly processed products such as frozen confections, seafood, specialty/confectionery goods and processed vegetable products, as well as pork for processing into ham and bacon.
- **Forestry Equipment:** Australia offers excellent export and investment opportunities for forest harvesting and sawmilling equipment. Our objective is to increase the presence of Canadian advanced technology and equipment for sawmills through agency agreements and licensing agreements with Australian companies. The National Association of Forest Industries estimates that \$7 billion in new investments is possible in the next few years.
- **Rail Equipment and Services:** Australia is in the process of upgrading and restructuring its railway industry. Over the next five years, \$3 billion will be spent on capital works and machinery to create a more efficient and cost-effective rail system.



■ **Environmental Equipment and Services:** The Australian market for environmental goods and services is worth US\$2 billion to US\$3 billion. Joint ventures and strategic alliances are the key to success.

■ **Advanced Technology and**

**Telecommunications:** The market for Canadian manufacturers, notably for high-technology products in advanced technology and telecommunications, is estimated to be \$20 million to \$23 million annually. Australia's information technology (IT) sector has enjoyed boom conditions in contrast with the sluggish growth of other industry sectors, with investments in excess of \$10 billion in the past two years in the communications industry alone. Deregulation of the Australian telecommunications industry, coupled with the extensive investment program of both Australian Telecom and the new second carrier, Optus Communications, offer excellent market conditions for sales of new equipment and the most up-to-date technologies. A number of large Canadian companies as well as SMEs have already established a presence through strategic alliances, agencies/distributors or local offices.

■ **Defence:** In the defence sector, the Australian government is buying new equipment for its armed forces, notably light armoured vehicles (LAV) from General Motors Diesel Division, F-18 related equipment, airborne search radar, CRV-7 rockets and sonobuoy processors.

Canadian companies have also won contracts with the Royal Australian Navy to refurbish submarines and build 12 frigates, 10 for Australia and at least two for New Zealand.

■ **Mining:** Mining is a mainstay of the Australian economy, and will continue to provide opportunities in the medium and long term. Australia is the world's fourth-largest gold producer and has significant supplies of coal and other minerals. Canadian replacement equipment, ranging from drill bits to hard rock crushing and processing equipment and associated mining services, is being sold in Australia.

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## New Zealand

### Introduction

With a population equivalent to that of Metropolitan Toronto, New Zealand is sometimes dismissed as a small and distant market. Nevertheless, it is a \$100-million market, particularly profitable for small- to medium-sized export companies.

Since 1984, the New Zealand economy, once one of the most highly regulated and protected in the developed world, has undergone radical liberalization designed to force New Zealand industry to become more internationally competitive. The import licensing regime has been dismantled and a significant program of tariff reductions has been implemented. Government subsidies have been eliminated and other forms of protection for business have been abandoned or reduced. While the process of adjusting to these reforms has been difficult, the New Zealand economy has begun to show signs of strength.

### Business Environment

Canada and New Zealand enjoy excellent bilateral trading relations based on the Trade and Economic Co-operation Agreement (signed August 1981, effective January 1982). This replaced the 1932 Canada-New Zealand Trade Agreement, and provides for the exchange of preferential tariffs, among other things. The Agreement also provides a mechanism for consulting on the state of the relationship and encourages closer business co-operation. The next meetings are scheduled for fall 1995.

In recent years, Canadian exports to New Zealand have increased. In 1993, exports rose to approximately \$117.5 million, up from \$104 million in 1992. Increased sales of fertilizers, wood and mechanical appliances accounted for most of this growth, although value-added exports, such as electronic and industrial equipment, precision equipment, sporting equipment and pharmaceuticals were also up by about 30 percent.

New Zealand's exports to Canada have consistently outpaced Canadian sales there, driven in large measure by significant sales of bulk commodities. Valued at \$253.5 million in 1993, New Zealand exports have risen steadily (up 25 percent from 1992).

### Market Opportunities

- **Agri-food:** New Zealand traditionally imports food items that are not produced locally. Canada, with 5 percent of the imported food market, is an established supplier of canned salmon, canned sardines, pork (for processing in New Zealand) and white beans. Canada has a reputation with both importers and consumers that can serve as a sound basis for efforts to introduce new lines of food products. Opportunities for Canadian exporters lie in specialty cheese, confectionery, canned and frozen fish, canned and frozen vegetables and fruit, pet foods, convenience meals, sauces, apples and pork products in consumer packages.
- **Consumer Goods:** Increased purchasing power arising from the New Zealand government's switch to a market-driven economy and the dismantling of the import licensing system presents Canadian exporters with an unprecedented opportunity to expand sales of consumer goods, particularly hardware, housewares and giftware items. Canada has traditionally been a preferred source of imports in this sector, and the relaxation of import protection has only served to reinforce this trend.
- **Forestry:** The sale of harvesting rights to half of the Crown plantation forest holdings (550 000 hectares of mature radiata pine) is well under way, and "the decade of development in the forest industry" is beginning. Many Canadian forestry equipment and consulting companies are already established in the New Zealand forestry sector, and the eventual requirements for new equipment offer opportunities for other Canadian manufacturers.

- **Telecommunications:** Deregulation of the telecommunications industry and the creation of a new state agency, Telecom Corporation, have resulted in new market potential for telecommunications equipment. In addition, Bell Canada is a major shareholder and operating partner in New Zealand's private-sector second carrier, Clear Communications. Modernization of the previous network, and expansion of Clear's second network will create opportunities for equipment and services, particularly in support of computerized billing systems, regional maintenance centres, and automatic telephone exchanges.

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## Africa and the Middle East

### Introduction

The markets in Africa and the Middle East are sometimes overlooked by Canadian businesses seeking new export markets. Several factors are responsible, including language differences, long distances and lack of familiarity with local cultures.

Although access to these countries is undeniably more difficult than to other more familiar markets, an effective penetration strategy and a sustained effort can lead to profitable business opportunities and an important return on investment. The oil and gas, telecommunications/high-technology, transportation and agri-food sectors currently offer the best business prospects. Nevertheless, other sectors such as services (e.g. education, banking/financial), environment, mining and energy are also expected to grow as a number of African countries move toward greater privatization and trade liberalization, and the benefits of the Middle East peace process become apparent.

In 1993, Canadian merchandise exports to the region totalled some \$2.5 billion, to which can be added an estimated \$1 billion in services.

## Africa

### Business Environment

In 1993, Canada's merchandise exports to Africa totalled \$1.2 billion. The range of Canada's exports varies considerably, from such basic products as wheat, timber and minerals to high-technology products such as telephone equipment, flight simulators, helicopters, as well as mining, oil, and equipment for generation and transportation of electricity. Africa is now an important market for Canadian service firms in engineering, management, education, health-care, informatics, and financial and banking services, to name only a few. In 1993, the estimated value of

Canadian services contracts with Africa was some \$500 million.

Over 50 percent of Canada's exports to the continent go to North Africa. These include cereals, dairy products, sulphur, lumber and minerals, as well as a wide array of manufactured products such as locomotives, telecommunications equipment, helicopters, construction machinery, chemical products, oil and gas and hydro-electricity generation and transmission equipment. North Africa is also an important market for Canadian services (engineering, consulting, education, health care, computer, financial services, etc.).

Canada's commercial involvement in Africa has increased remarkably over the past 25 years. Our development assistance programs, the funding programs of the Export Development Corporation (EDC), our involvement in la Francophonie and the Commonwealth, our initiatives with respect to fighting apartheid and forgiving the debts of a number of African countries, have reinforced Canada's positive image on the continent. The fact that Canada is a bilingual country, and the complementary nature of these countries' needs and Canada's sectoral expertise, give Canadian exporters a further advantage.

In recent years, an increasing number of African countries have adopted political and economic reforms to establish multipartite systems, liberalize foreign trade, streamline public finances and develop the private sector. These reforms (which Canada actively supports) have served to create many new business opportunities for equipment, services and investment. Various privatization programs have also led to a renewed emphasis on education and training, and important new business opportunities in consulting, training, management and financial services. Many of the reform initiatives that are being implemented have been financially supported by the World Bank and the African Development Bank, with additional support from the Canadian International Development Agency.

Government activities in Africa are designed to take advantage of trade and investment opportunities arising from the various economic restructuring programs that are under way. Priority will be placed on developing commercial and investment relations with the emerging private sector of these countries and on opportunities funded by international financial institutions (IFIs). Export development initiatives will be complemented with activities to promote opportunities for joint ventures and technology transfers.

Export financing is an issue in many African countries. Exporters therefore often consider seeking offshore guarantees, and focus on revenue-generating sectors and/or development initiatives supported by IFIs.

## Market Opportunities

Sectors offering the most promising opportunities for Canadian exporters in each country are:

- **South Africa:** The dismantling of Canada's trade restrictions continues to spur rapid growth in Canadian exports in a wide range of sectors. In the first half of 1994, Canadian exports were valued at \$105 million — an increase of 76 percent over the same period last year. (Before the sanctions, the export market was valued at \$500 million.) A significant proportion of Canadian products sold are manufactured and high-tech products. The prospects for future business opportunities are also bright. As South Africa becomes more fully integrated into the regional and global economies, new business opportunities will emerge in the fields of mining, telecommunications and informatics, geomatics, environment, security products and medical products and services.
- **Algeria:** This is Canada's single-largest market on the continent. Significant opportunities exist in oil and gas, transportation, construction, telecommunications, irrigation, agriculture, industrial development and services



(engineering, management, education and training, banking and financial). Recently, Algeria indicated that it will give priority to importing agricultural commodities, construction material and pharmaceutical products.

- **Morocco:** Opportunities exist in agriculture, telecommunications, transportation, industrial infrastructure, oil and gas and energy, environment, computer equipment and services, education and training, and financial services.
- **Tunisia:** There is potential in oil and gas, environment, telecommunications, transportation, electricity generation and transmission, and financial services.
- **Sub-Saharan Africa:** With the exception of South Africa, available resources dictate that Canada target its trade development program on the following countries: Nigeria, Gabon, Ghana, Angola, Kenya, Zimbabwe, Cameroon, Zambia, Tanzania, Senegal and the Ivory Coast. The following sectors have been designated as priorities: hydrocarbons, telecommunications, mining and related services.

## Middle East

### Business Environment

With the reconstruction efforts that followed the end of the Gulf War and the new political environment created by the Middle East peace process, the regional trade environment has tended to improve. Awareness of Canada's capabilities as a trading partner has also increased. A significant potential therefore exists for Canada to increase its market share in the region, in spite of stiff competition and current economic and financing constraints. The key challenge confronting the Canadian business community will be to capitalize quickly on new trade opportunities as they develop.

Including Egypt, merchandise exports to the region in 1993 totalled close to \$1.3 billion; when services are added to these figures, Canadian

exports amounted to more than \$1.8 billion. Merchandise exports in the first seven months of 1994 exceeded \$718 million.

For the most part, the region is a cash market with a large appetite for Canadian high technology, including security equipment. Canada's status as a significant importer of Middle East oil (in the range of \$800 million annually) may offer opportunities for exchanges for manufactured and advanced technology exports. Currently, commodities make up much of what Canada exports to the region, although value-added goods, services, technology transfer and joint ventures represent areas of significant growth. In recent years, for example, Canada has registered major sales of defence and high-technology products. Substantial trade opportunities in other sectors are being actively pursued by a number of Canadian exporters.

On the financing side, EDC has designated the Middle East as a priority market and is eager to review opportunities for project financing. It has concluded a line of credit of \$500 million with Kuwait, and a \$1-billion line of credit is under discussion with Saudi Arabia. EDC is also insuring certain transactions with Iran and has three lines of credit with Israeli banks.

### Market Opportunities

Canada enjoys a reputation as a reliable supplier of quality goods and is recognized as a country willing to assist in development and technology transfer. A number of opportunities exist in the education and training field that Canada is well-positioned to exploit, given its bilingual character. Many Canadian universities and colleges, as well as services exporters, are already active in this sector and could therefore capitalize on emerging opportunities.

Canada is increasingly recognized throughout the region as a world leader in telecommunications and information technology, transportation, environmental technologies, agriculture, biomedical technologies, and power generation

and energy transmission. All of these sectors are considered priorities by Canadian trade missions in the region, and are likely to present viable business opportunities to active Canadian exporters.

Services exports, estimated at several million dollars per year, represent a significant part of Canadian sales to the Middle East. Consulting engineering in the oil and gas and the power generation sectors has traditionally accounted for most of these exports. Nevertheless, Canadian expertise is gradually being recognized in such diverse fields as environment, livestock management, dairy genetics, architectural services, education, training, geomatics and financial services.

The major potential market sectors by country are:

- **Iran:** As the second-largest Canadian market in the region, Iran offers the best prospects in the agriculture and oil and gas sectors. Strong potential also exists in the transportation, high-technology and educational sectors.
- **Israel:** Canadian exports cover a full range of goods, including commodities, manufactured goods and advanced technologies. Other interesting prospects are information technologies and telecommunications, transportation, biotechnologies, environment and power generation. Significant opportunities also exist for greater joint venture co-operation.
- **Jordan:** Opportunities exist in telecommunications, agri-food industry, mining equipment and services, industrial machinery and transportation.
- **Lebanon:** A major reconstruction effort estimated at \$10 billion over the next 10 years offers a number of business opportunities to Canadian firms in the areas of telecommunications and related technology, energy, health products and services, and construction.
- **Saudi Arabia:** Saudi Arabia represents Canada's primary market in the Middle East. Contracts of several billion dollars are being actively pursued by Canadian firms in the fields of telecommunications and advanced technologies, security products, transportation, agriculture and food products, mining and mineral equipment, oil and gas and services.
- **Syria:** Interesting potential exists in transportation, mining, industrial machinery, oil and gas, aeronautics, telecommunications and power generation.
- **Kuwait:** Sectors offering potential for Canadian sales include transportation, security equipment and services, agri-food, geomatics, telecommunications, oil and gas, health care, and power and energy.
- **United Arab Emirates (UAE), Oman, Qatar, Bahrain:** The UAE and Qatar are seeking Canadian technology in the petrochemical sector. Opportunities also exist in agriculture and telecommunications, as well as in education and training services, defence products, transportation, construction and oil and gas. In April 1993, a Canadian consulate was opened in Dubai to better serve Canadian companies pursuing opportunities in the region. In Oman, potential exists in the fishing industry for sales of fishing vessels, port facilities, equipment and related services.

## Contact

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## Canada Business Service Centres

A network of Canada Business Service Centres (CBSCs) has been established across the country to provide business with a single point of contact for queries about federal or provincial government programs and services. CBSCs either respond directly to queries or identify where answers may be obtained.

For further information, please contact one of the following Canada Business Service Centres:

Canada/British Columbia Business Service  
Centre (Vancouver)  
1-800-667-2272

Tel.: 604-775-5525  
Fax: 604-775-5520  
Faxback: 604-775-5515

Canada Business Service Centre (Edmonton)  
1-800-563-9926  
Tel.: 403-495-6800  
Fax: 403-495-7725

Canada/Saskatchewan Business Service  
Centre (Saskatoon)  
1-800-667-4374  
Tel.: 306-956-2323  
Fax: 306-975-2328  
Faxback: 306-956-2310  
Faxback: 1-800-667-9433

Canada Business Service Centre (Winnipeg)  
1-800-665-2019  
Tel.: 204-984-2272  
Fax: 204-983-2197  
Faxback: 204-984-5527  
Faxback: 1-800-665-9386

Canada/Ontario Business Service  
Centre (Toronto)  
1-800-567-2345  
Tel.: 416-954-4636  
Fax: 416-954-8597  
Faxback: 416-954-8555

Info Entrepreneurs (Montréal)  
1-800-322-4636  
Tel.: 514-496-4636  
Fax: 514-496-5934  
Infobox: 514-496-4010  
Infobox: 1-800-322-4010

Canada/Prince Edward Island  
Business Service Centre (Charlottetown)  
1-800-668-1010  
Tel.: 902-368-0771  
Fax: 902-566-7098  
Faxback: 902-566-7098  
Faxback: 1-800-401-3201

Canada/Nova Scotia Business Service  
Centre (Halifax)  
1-800-668-1010  
Tel.: 902-426-8604  
Fax: 902-426-6530  
Faxback: 902-426-3201  
Faxback: 1-800-401-3201

Canada/Newfoundland Business Service  
Centre (St. John's)  
1-800-668-1010  
Tel.: 709-772-6022  
Fax: 709-772-6090  
Faxback: 709-772-6030

## Cross-sectoral Activities

The International Trade Business Plan comprises this Overview and 23 separate Industry Sector Strategies, each with an accompanying list of proposed activities. A list of these sectors can be found on the inside front cover of this publication.

The following is a list of international business development activities that do not relate to any specific sector, but are cross-sectoral in nature.

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Cairo International Fair: Info Booth	Apr-95	Cairo	DFAIT	613-944-6994
Canada-Israel Joint Economic Commission	Apr-95	Jerusalem	DFAIT	613-944-6994
"Doing Business in Israel" Guide for Exporters	Apr-95	Tel Aviv	DFAIT	613-944-6994
South Africa Guide for Exporters: Update	Jun-95	Johannesburg	DFAIT	613-944-6590
Transport Expo '95: Info Booth	Sep-95	Johannesburg	DFAIT	613-944-6590
Damascus International Fair: Info Booth	Sep-95	Damascus	DFAIT	613-944-6346
Tehran International Trade Fair: National Stand	Oct-95	Tehran	DFAIT	613-944-7029
Saudi Council of Chambers of Commerce Mission	Oct-95	Canada/Various	DFAIT	613-944-5984
South Africa Market Opportunities Study	Oct-95	Various Cities	DFAIT	613-944-6590
SAITEX '95: Info Booth	Nov-95	Johannesburg	DFAIT	613-944-6590
<b>Asia-Pacific South</b>				
Ristek '95: Info Booth (Science & Research Technology)	May-95	Jakarta	DFAIT	613-992-0959
Catalogue Show	Sep-95	Manila	DFAIT	613-995-7659
Catalogue Show	Nov-95	Khulna	DFAIT	613-992-0952
Keynote Conference	06-Feb-96	Manila	DFAIT	613-995-7659
<b>Canada</b>				
Canada Export Award Program	Feb-95	Fredericton	DFAIT	613-996-2274
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Multisectoral Mission to Bulgaria	May-95	Sofia	DFAIT	613-992-1449
Corel World Conference and Exhibition	Jun-95	Ottawa	IC	613-954-3294
Poznan International Fair - Investment Goods: Info Booth	Jun-95	Poznan	DFAIT	613-996-7107
Multisectoral Mission to Russian Far East	Sep-95	Siberia	DFAIT	613-996-6429
TIB '95 Industrial Fair: National Stand	Oct-95	Bucharest	DFAIT	613-992-1449

Note: Dates and locations are subject to change.



Activity	Date	Location	Dept.	Contact
<b>East Asia</b>				
Canada/Korea: Third Markets Studies	May-95	Seoul	DFAIT	613-995-8744
Catalogue Shows	Sep-95	India/Various	DFAIT	613-996-5903
Solo Canadian High Technology Event	Oct-95	Shanghai	DFAIT	613-995-6962
Canada Week/Mission	Oct-95	Pusan, Korea	DFAIT	613-995-8744
Aftak (Korea Foreign Trade Agents) Mission	Mar-96	Vancouver, Toronto, Halifax	DFAIT	613-995-8744
<b>Latin America and the Caribbean</b>				
Puerto Rico Trade Show: National Stand	Apr-95	San Juan	DFAIT	613-944-9479
Mission: IFI Funded Projects	18-Apr-95	Caribbean/Various	IC	514-283-8795
Canada Expo '95: Solo Show	Nov-95	Sao Paolo	DFAIT	613-996-5549
Consulting Services and Trading Houses Mission	Nov-95	Kingston	DFAIT	613-943-8807
<b>United States</b>				
Port Authority of New York & New Jersey: Market Opportunities	Apr-95	New York, N.Y.	DFAIT	613-944-9441
New Jersey State Government Procurement Study	Apr-95	New York	DFAIT	613-944-9441
Company Showcase/Partnering	Apr-95	New York	DFAIT	609-452-0777
Investment Newsletter	Apr-95	Ottawa	DFAIT	613-944-9485
New Exporters' Missions from Manitoba, Saskatchewan, Alberta	Apr-95	Minneapolis	DFAIT	613-944-6577
New Exporters' Mission to Seattle	Apr-95	Seattle	DFAIT	613-944-6577
Software/Multimedia Directory Update	Apr-95	Boston	DFAIT	617-262-3760
Profile of Financial Services Firms in New England	Apr-95	Boston	DFAIT	617-262-3760
Northeast Foodservice Show: National Stand	24-Apr-95	Boston	DFAIT	617-262-3760
Trade Mission to Western U.S. Public Procurement Conference	May-95	Los Angeles	DFAIT	613-944-9441
Market Study: New Sectors in U.S. Federal Procurement	May-95	Washington, D.C.	DFAIT	613-944-9441
National Restaurant Association: National Stand/Mission	20-May-95	Chicago	DFAIT	613-944-9474
Venture Capital Forum	Jun-95	New York	DFAIT	212-596-1655
Investors' Mission from New York	Jun-95	Toronto, Ottawa	DFAIT	212-596-1655
New Exporters' Mission: Border Crossing Procedures/Markets	Jun-95	Fargo	IC	204-983-4586
Economic Development Outgoing Mission	Jun-95	Boston	DFAIT	613-944-7348
Venture Capital Forum	Aug-95	Detroit	DFAIT	313-567-2340
Market Study: Mid-Atlantic State Procurement Opportunities	Sep-95	Washington, D.C.	DFAIT	613-944-9441
Market Study: U.S. Acquisitions System Electronic Bidding	Sep-95	Washington, D.C.	DFAIT	613-944-9441
Ontario Matchmaker Partnering Event	Sep-95	Detroit	DFAIT	313-567-2340



Government  
of Canada

Gouvernement  
du Canada

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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

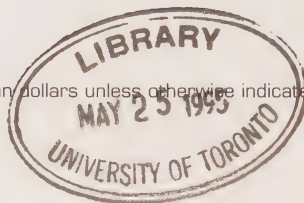
1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Technologies de fabrication de pointe.*





## Advanced Manufacturing Technologies

Advanced manufacturing technologies (AMT) are used in the design, scheduling, production, storage and distribution of manufactured products. They include "hard" technologies such as computer-aided design (CAD) software, robotics, machine vision and computer-controlled machine tools and "soft" technologies such as concurrent engineering and just-in-time production. AMT, which use both information and microprocessor technologies, are increasingly powerful methods to integrate islands of automation into computer-integrated manufacturing systems.

### International Environment

Technology innovation, trade liberalization and the globalization of business are transforming the nature of manufacturing, particularly in higher technology sectors such as electronics, aerospace and automotive. They rely heavily on AMT to maintain their competitive edge. Successful firms in all sectors are using AMT to introduce to global markets new, high-quality products. With AMT, they can be produced quickly, less expensively, in smaller lot sizes, and with more features.

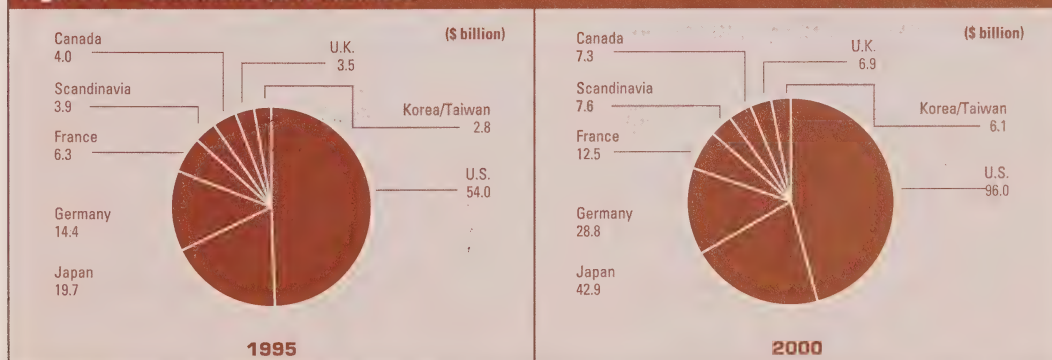
In 1990 worldwide investment in AMT products, services and systems was \$57 billion. Investment is increasing at a compound annual growth rate of 13 percent. By the year 2000 the market is expected to be \$208 billion. North America represents 53 percent of the world market. As Asian and European investment

continues to grow, however, their share is expected to increase to 52 percent by 2000.

The following figure projects AMT markets in major user countries to the year 2000.

Japan and Germany are leading exporters of AMT products. Japan is a leader in producing machining centres, industrial robots and flexible manufacturing systems, while Germany has established a lead in precision machining technologies and has built a strong export machine tool industry. Companies using and supplying AMT in these two countries have developed a lead over their competitors, through greater collaboration among firms and due to their ability to rapidly develop and apply new technologies. The United States dominates the factory systems market, primarily due to its strengths in the development of software and computer hardware.

**Figure 1 — Worldwide AMT Markets**



Source: Year 2000 Report

The next generation of manufacturing, known as "agile manufacturing," brings design, production and inventory control into integrated systems. These can quickly and economically change from one product to another, both within a production facility and between facilities. Manufacturing processes are becoming more sophisticated, and new automated equipment is being developed. The use of new materials is accelerating, and advanced processing machinery is required. Following completion of a two-year feasibility phase, Australia, Canada, Europe, Japan and the United States are expected to co-operate in a 10-year technology development project, known as the Intelligent Manufacturing Systems (IMS) Program. IMS aims to develop new manufacturing and processing technologies, and establish international standards for the next generation of industrial technologies, while sharing the costs and risks among consortium members.

## Canadian Position

Canadian AMT companies include systems integrators and producers of machine tools, robots, machine vision, automated manufacturing systems, plastic processing machines, instrumentation and manufacturing software.

There are approximately 500 AMT producers in Canada, with shipments of approximately \$2.2 billion. Exports are about 60 percent of output, and imports in 1992 were \$1.4 billion. The sector employs some 18 000 people, including many skilled workers and professionals.

The major markets for Canadian products and services are countries with a modern manufacturing base. These include the United States, Europe, Japan, Latin America (primarily Mexico), Taiwan, Korea, Malaysia, Hong Kong and Thailand. Opportunities for increased exports exist in traditional markets such as the United States (which accounts for about 75 percent of Canadian exports) and Europe, where manufacturers are investing

heavily to upgrade facilities. Good prospects also exist in the fast-growing market of Southeast Asia, where industry is gearing up for large increases in production, and in Mexico, where the recently signed North American Free Trade Agreement (NAFTA) is spurring investment.

Canadian manufacturers of AMT products are generally much smaller than their competitors in other countries. The largest Canadian firms report annual sales of \$300 to \$350 million. Competitor firms such as Allen-Bradley, Mitsubishi and Siemens have sales many times greater, and have established international marketing channels.

Successful, fast-growing Canadian firms generally sell the bulk of their products in overseas markets. The majority of them have developed proprietary technologies and pursued niche marketing strategies. An example is ATS Automation Tooling Systems Inc., of Cambridge, Ontario, which builds high-precision automation systems for the manufacture and assembly of products. Its systems are being used in a variety of industries, including automotive, computers, electronics, medical appliances, telecommunications, semiconductors and aerospace. This firm's revenues were \$51 million in 1991, and they are expected to reach \$120 million in 1994.

Industry Canada (IC) has established the AMT Initiative with the objective of developing a strong, technically advanced, export-oriented AMT sector. This initiative, which ends on March 31, 1996, provides financial support for technology capability development, product development and international market studies. Recognizing that world-class manufacturing requires the integration of information, machinery and human resources, the AMT Initiative also supports human resource studies, mini-networks, industry/university research projects and senior manager exchanges. Approximately \$5 million of the original budget for grants and contributions is still available for new projects.

## Strategic Direction

The continued growth of the AMT sector depends on the development of leading-edge products, through research conducted individually and within domestic and international consortia. These must be coupled with market research and intelligence and aggressive sales efforts in existing and new market areas.

The goal in the AMT sector is to increase shipments by the year 2000 to \$4 billion, through sales to existing markets in Canada and the United States, and through the development of new markets in Europe, Mexico and Asia.

To achieve this goal, the Government, in co-operation with industry, will:

- help companies identify and take advantage of opportunities, emerging markets, technology shifts and potential threats through market observation efforts in the United States, Mexico and Europe. Market opportunity analysis and identification will be supported through the Program for Export Market Development (PEMD), and through market studies funded under the AMT Initiative (IC, Department of Foreign Affairs and International Trade [DFAIT]);
- provide financial support to companies for technology core enhancement and product development, through the AMT Initiative, and through the Industrial Research Assistance Program (IRAP), which is administered by the National Research Council (IC, NRC);
- complete profiles of small- and medium-sized firms with leading-edge technologies that are seeking partnerships abroad. These will be used for technology events both in Canada and abroad, with particular emphasis on Mexico (IC, DFAIT);
- focus in the United States on value-added activities with small- and medium-sized technology-driven firms. This will include

attendance at regional shows, missions of U.S. industrial representatives to Canada, and the development of a comprehensive capability guide for the Canadian AMT sector (IC, DFAIT);

- support AMT research projects by Canadian companies in conjunction with technology institutes and firms in Japan, through the Japan Science and Technology Fund. The fund also supports manufacturing engineer exchanges, and the objective is for five Canadian engineers to undertake work terms of 6 to 12 months in Japanese manufacturing firms (IC);
- promote involvement and provide financial support for pre-competitive research conducted by Canadian firms within international consortia, through the Intelligent Manufacturing System (IMS) program. This 10-year program will involve industry, academia, research institutions and governments. A Canadian regional office will be set up to co-ordinate Canadian participation in IMS projects. Canada's initial involvement will be in five research projects (IC);
- work toward the establishment of a productivity resource centre in Canada like the Fraunhofer Institutes in Germany (IC, DFAIT).

## Further Information

Industry Canada's Manufacturing and Processing Technologies (MPT) branch can supply material relevant to the sector analysis and the "Phase III Implementation Proposal" strategy, as well as a news release dated October 19, 1994, entitled "Canadian to Chair Steering Committee for International Program of R&D in Manufacturing Systems," and "The Year 2000 Report."

Specific information on program elements of the AMT Initiative is available through Industry Canada regional offices.

## **Contact**

Industry Canada  
Manufacturing and Processing Technologies Branch  
235 Queen Street  
Ottawa K1A 0H5  
Tel.: (613) 954-3249  
Fax: (613) 941-2463



## Advanced Manufacturing Technologies

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Industrial Machinery Mission to Middle East	Feb-96	Amman, Riyadh	DFAIT	613-944-6346
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Strategic Partnering Cold Ocean Seminar	Sep-95	Oslo	DFAIT	613-995-7941
Investment and Partnering Seminar	Nov-95	Dusseldorf	Ontario	416-325-6654
<b>Latin America and the Caribbean</b>				
Market Study for Mexico	Jan-95	Montréal	IC	514-283-7814
Brasilplast '95 National Stand/Mission	18-May-95	Argentina	DFAIT	613-996-5549
Canada Technology Month: Shows	Sep-95	Mexico City	DFAIT	613-995-8742
Advanced Technology Mission	Nov-95	Sao Paulo, Bogota	DFAIT	613-996-5548
<b>Multiple Markets</b>				
Sector Capability Directory	Apr-95	Ottawa	DFAIT	613-944-8821
Canadian Advanced Technology Conference: Incoming Missions	03-May-95	Toronto	DFAIT	613-996-1908
K '95: Plastics Show: National Stand	Oct-95	Dusseldorf	IC	613-996-1530
<b>United States</b>				
Packaging Material Sector Study	Apr-95	Buffalo	DFAIT	613-944-8821
U.S. Printing Sector Study	Apr-95	Ottawa, U.S. Missions	DFAIT	613-944-8821
National Industrial Fastener Show: National Stand	May-95	Cleveland	DFAIT	613-944-8821
Maintenance/Design Engineering Show: Visitors	May-95	Montréal	DFAIT	613-944-8821
Gutenberg Festival (Printing): Info Booth	May-95	Anaheim	DFAIT	613-944-8821
Subcon '95 (Defence/AMT): Incoming U.S. Missions	Jun-95	Toronto	DFAIT	613-944-8821
Rep. Locator Event: Outgoing Mission	Sep-95	Cleveland	DFAIT	613-944-8821
U.S. Market Opportunities Study for Plastics Processing Equipment	Sep-95	Ottawa	DFAIT	613-944-7486
Iron and Steel Expo: National Stand	25-Sep-95	Pittsburgh	DFAIT	613-944-8821
Job Solo Show	Oct-95	Boston	Ontario	416-325-6650
Graphexpo '95: National Stand	08-Oct-95	Chicago	DFAIT	613-944-8821
Westpack '95: National Stand	17-Oct-95	Anaheim	DFAIT	613-944-8821
Process Control Technologies and Software Mission	Nov-95	Boston	DFAIT	902-426-8454
Electronic Equipment: Trade Show/Mission	Nov-95	Boston	IC	902-426-8454
Mission of Mold & Dye Manufacturers	Dec-95	Akron	DFAIT	613-944-7486

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
Promat '96: Info Booth	Feb-96	Detroit	DFAIT	613-944-8821
National Manufacturing Week: National Stand	Mar-96	Chicago	DFAIT	613-944-8821
National Design and Engineering Show: Ontario Stand	Mar-96	Chicago	Ontario	416-325-6650
Material Manufacturing Week: National Stand	Mar-96	Chicago	DFAIT	613-944-8821
International Manufacturing Technology Show: National Stand	Sep-96	Chicago	DFAIT	613-944-8821

### Western Europe

DRUPA Show: National Stand	05-May-95	Dusseldorf	DFAIT	613-995-1530
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## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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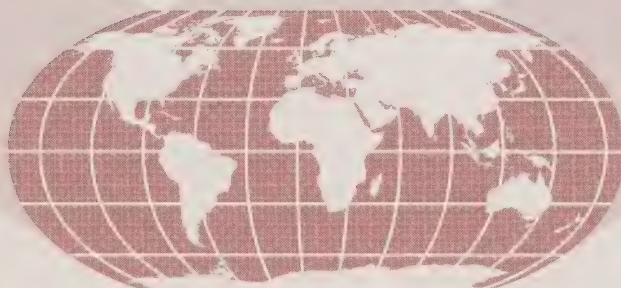
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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

***1995/96***

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- Overview
- 1. Advanced Manufacturing Technologies
- 2. Agriculture and Food Products
- 3. Aircraft and Parts
- 4. Automotive
- 5. Biotechnologies
- 6. Business, Professional and Educational Services
- 7. Chemicals, Plastics and Advanced Materials
- 8. Construction Products
- 9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
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# Agriculture and Food Products

**A**griculture and food products include primary products such as livestock and grains; semi-processed products such as flour and pet food; and value-added products such as bakery goods and beverages. Agricultural machinery, equipment and services are discussed in other industry sector reports.

## Agri-food Products

The agri-food industry is an integral part of Canada's economy. It accounts for 8 percent of our gross national product (GNP) and employs close to 2 million people. For every \$1 billion of value-added exports, 15 000 new jobs are created in Canada.

## Canada's Trade Strategy

The goal of Canada's agri-food trade strategy is to increase the value of our exports of agri-food products to \$20 billion by the year 2000. This goal will be reached by combining the strong determination of the industry with appropriate support from the Government. Ultimately, Canada's goal is a 3.5-percent share of the world's trade in agriculture and food.

The strategy will focus on four areas:

- providing up-to-date market information — country and product profiles, market information and intelligence, and information on Canadian companies and their capabilities;

- assisting Canadian companies to become export ready;
- promoting exports of value-added products while expanding the trade of bulk commodities in existing and new markets;
- streamlining the delivery of federal and provincial programs and services.

Canada's goal will be reached through sustained co-operation between the agri-food industry and all levels of government. A stronger partnership on trade development issues is evolving between Agriculture and Agri-food Canada, the Department of Foreign Affairs and International Trade (DFAIT), and the provinces as a means of achieving that co-operation. Increased industry/government collaboration will be pursued in the following areas:

### Export Preparation

- assisting the food industry through the "Getting Ready to Go Global" campaign;
- developing a separate agri-food module for the Forum for International Trade Training (FITT) course;
- encouraging small- and medium-sized enterprises (SMEs) to form business networks through the Business Networks Program;
- implementing the Agri-food Trade Network for faster and more effective distribution of market information;
- maintaining public policies and programs that support increased food production and processing in Canada for domestic and international markets.

**Table 1 — Agri-food Contribution to Canada's Economy**

	% of Economy GDP	Number of employees	% of Total Employment
Agriculture	2.1	449 000	3.7
Food Processing & Beverage	2.1	230 000	1.9
Distribution, Retail & Food Service	3.8	1 143 000	9.4
<b>Total for Industry</b>	<b>8.0</b>	<b>1 822 000</b>	<b>15.0</b>

Source: Statistics Canada

## Trade Development

- developing a Canadian theme to be used in market development and promotion;
- updating and combining provincial and federal government directories of Canadian export-ready companies and making them available to industry;
- encouraging industry subsectors to think strategically, to take responsibility for a share of the \$20-billion goal, and to work collectively to achieve their share;
- encouraging more industry associations and alliances, especially those producing value-added products, to participate in the Agri-food Industry Market Strategies (AIMS) process;
- fostering collaboration among subsectors by cross-marketing complementary products in markets of mutual interest;
- encouraging foreign companies to invest and make strategic alliances in Canada to give us better access to international markets, new technology and capital and to improve our supply capabilities.

## Market Entry

- capitalizing on improved access for key Canadian products emerging from the General Agreement on Tariffs and Trade (GATT) negotiations;
- negotiating opportunities with new member countries joining the World Trade Organization (WTO);
- defending Canadian export interests against trade actions by other countries;
- using the provisions of the Agreement on Sanitary and Phytosanitary Measures, which are intended to ensure that health and sanitary measures in other countries are not barriers to trade.

## Streamlining

- minimizing duplication and making the best use of shrinking resources through the Federal-Provincial Market Development Council;
- working with other government departments and industry to give priority to incoming missions over outgoing missions;

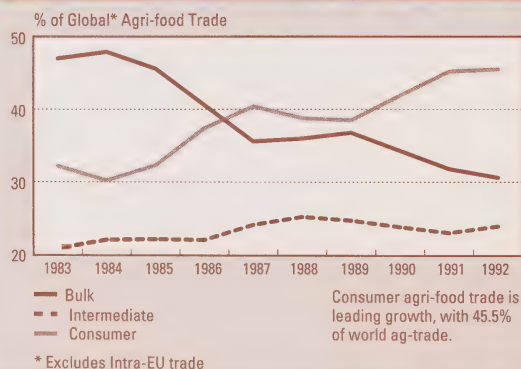
- improving service to industry through co-location of regionally based federal and provincial staff and "single-window" access to information on government services;
- developing the International Trade Business Plan with industry, Canadian agri-food specialists abroad, and federal and provincial departments.

## International Environment

Total global agri-food exports were close to US\$400 billion in 1993. Between 1972 and 1992 the average yearly growth rate was 8 percent. Canada's share of this trade is about 3 percent.

Globally, the food side of the agri-food sector is experiencing dramatic growth. Value-added products, such as meat, bakery goods and dairy products, constitute the largest, fastest-growing and most profitable part of the world's agri-food trade. If we are to exceed or even reach our goal of \$20 billion by the year 2000, we will have to make a major shift in our trade product mix. We need a substantial increase in exports of value-added, consumer-ready products and continued growth in exports of bulk commodities.

**Figure 1 — Trends in Agri-food Trade**



Prepared by: Int'l Markets Bureau, MISB, AAFB  
Source: FAO, UN Stats. Office, and USDA FAS

## Canada's International Markets

The United States continues to be our most important market, followed by Asia, Mexico and Western Europe. The following briefly describes Canada's foreign agri-food markets.

### United States

#### *Regional Overview*

The processed food and beverage sector is the largest manufacturing sector in the United States. In 1993, the value of this sector's shipments reached \$404 billion, 2 percent higher than in 1992. In 1993, U.S. imports of these commodities dipped slightly under \$21 billion; 45 percent of these imports were high-value-added, consumer-ready products. Canada's share of these high-value imports remained steady at just under 15 percent. In terms of volume and range of products sold, the United States continues to be Canada's most important export market for processed and semi-processed agri-food products.

#### *Trade Policy Issues*

The Uruguay Round of GATT talks has concluded, but there remain some bilateral issues regarding market access that have not been resolved by negotiators. A bilateral Blue Ribbon Commission has been established to examine the two countries' grain marketing and support programs, and work is

ongoing to reach long-term solutions to outstanding problems and achieve a better trading position for grains. Tariff elimination negotiated under the North American Free Trade Agreement (NAFTA) continues to be phased-in.

#### *Market Opportunities*

There are many opportunities for specialty and gourmet foods, for products aimed at ethnic markets, and for natural, nutritious and fresh products that are also tasty and safe. There is a demand for convenient, attractively packaged and competitively priced foods. The key to success in the U.S. market is targeting specific geographic and niche markets for items with a high profit margin, and selecting the best distribution channels.

Canadian firms can capitalize on smaller production runs geared to the niche markets in North America. In specific subsectors, our firms can compete successfully in the U.S. market on the basis of flexibility of operation, input advantages or overall cost. Good opportunities also exist for retail private-label products.

Processed food and beverage sales to the United States includes, among other items, red meat products, cereals, frozen fruit and vegetables, biscuits, chewing gum and confectionery items, soft drinks and mineral water, and distillery and brewery products.

Activity	Date	Location	Dept.	Contact
<b>United States</b>				
Chicago - Database Project Guide to the Midwest Market	TBD	Chicago	DFAIT	312-616-1860
Matchmaker Missions	TBD	U.S./Various	DFAIT	613-944-9474
Incoming Food Buyers' Mission - United States	TBD	Toronto	Ontario	416-326-3775
Food Beverage Canada	Ongoing	U.S.	WED	306-975-5880
PROFIT	Jan-95	Buffalo	Ontario	416-326-3564
NFDA Winter	12-Jan-95	San Antonio	Ontario	416-326-3790
Reception - Wine Tasting	Feb-95	Boston	Ontario	416-326-3790
Retail Bakers' Association Trade Show	09-Mar-95	Philadelphia	Ontario	416-326-3775
Fancy Foods Expo West - Trade Show	21-Mar-95	San Francisco	Ontario	416-326-3790

Activity	Date	Location	Dept.	Contact
Market Study - Specialty Distributors Alternatives	Apr-95	Minneapolis	DFAIT	612-333-4641
Publication Update - Marketing Food Products in the U.S.	Apr-95	Ottawa	DFAIT	613-944-9474
Booklet - Agri-food Trade Events in the U.S. - Review & Update	Apr-95	Canada	DFAIT	613-944-9474
Canadian Connections - Presentations at Meetings of Food Brokers	Apr-95	Washington, D.C.	DFAIT	202-682-1740
New Exporters - Grocery Products	Apr-95	Seattle	IC	604-666-1443
Nation's Capital Food Service Expo	Apr-95	Washington, D.C.	N.B.	506-392-6022
Food-Processing Strategic Alliance	Apr-95	Minneapolis	DFAIT	613-944-7348
Agri-food Strategic Alliance Project	Apr-95	Chicago	DFAIT	613-944-7348
New England Dairy-Deli Bake Association Taste Show	18-Apr-95	Dorchester	MAPAQ	514-873-4410
Northeast Food Service & Lodging Expo and Conference	23-Apr-95	Dorchester	MAPAQ	514-873-4410
Arizona Retail Grocers - Trade Show	May-95	Arizona	DFAIT	213-346-2767
Cluster Plus - Strategic Mapping - Market Study	May-95	Chicago	DFAIT	312-616-1860
Agriculture Strategic Alliance Project	May-95	Chicago	DFAIT	613-944-7348
North American Fur Fashion Exposition	May-95	Lyndhurst	N.S.	902-893-6388
NEBS to FMI - Chicago	07-May-95	Chicago	DFAIT	612-616-1860
FMI Trade Show & Mission	07-May-95	Chicago	N.S.	902-893-6388
FMI Trade Show	07-May-95	Chicago	Ontario	416-326-3790
National Restaurant Association Show	20-May-95	Chicago	DFAIT	613-944-9474
Food Packaging Seminar in Western Canada	Jun-95	Western Canada	DFAIT	612-333-4641
Atlanta - Livestock Fodder Study	Jun-95	Atlanta	DFAIT	404-577-6810
Minneapolis - Food Packaging Seminar in Western Canada	Jun-95	Western Canada	DFAIT	613-944-9474
International Food Technologists Trade Show	03-Jun-95	Anaheim	Ontario	416-326-3693
International Dairy & Deli Show	18-Jun-95	San Jose	Ontario	416-326-3481
Superfloral Show	22-Jun-95	Columbus	Ontario	416-326-3537
Texas Food Service Expo	25-Jun-95	Dallas	Ontario	416-326-3775
Nurserymen's Show Minneapolis - Mission	Jul-95	Minneapolis	DFAIT	612-332-4641
Summer Fancy Food Show	09-Jul-95	New York	DFAIT	613-944-9474
National Food Distributors - NFDA Show	20-Jul-95	New Orleans	DFAIT	613-944-9474
NFDA Trade Show	22-Jul-95	New Orleans	Ontario	416-326-3790
NEBS Mission - Grocery Products to Minneapolis	Aug-95	Minneapolis	DFAIT	612-333-4641
Michigan Restaurant Show	Aug-95	Michigan	Ontario	416-326-3564
Western Restaurant	26-Aug-95	Los Angeles	Ontario	416-326-3790
California Grocers' Association	Sep-95	Los Angeles	DFAIT	213-346-2726
New Exporters - Food Service Companies	Sep-95	Seattle	IC	604-666-1443
Southeastern U.S. Food Service Expo	Sep-95	Orlando	N.B.	506-453-2214
Natural Products Expo East	Sep-95	TBD	DFAIT	613-944-9474
Best of Canada - Trade Show	Sep-95	Atlanta	MAPAQ	514-873-4410



<b>Activity</b>	<b>Date</b>	<b>Location</b>	<b>Dept.</b>	<b>Contact</b>
Eastern States Exposition Food/Livestock	Sep-95	W. Springfield	N.S.	902-893-6388
Michigan Grocers' Show	Sep-95	Grand Rapids	Ontario	416-326-3564
Natural Products Expo East	15-Sep-95	Baltimore	Ontario	416-326-3693
California Grocers	29-Sep-95	San Diego	Ontario	416-326-3790
S.E. Restaurant/Hospitality/Food Show - Mission	Oct-95	Atlanta	DFAIT	404-577-6810
Produce Marketing Association	Oct-95	Various	N.B.	506-453-2214
Pennsylvania Restaurant Association Food Service Show	Oct-95	Philadelphia	N.B.	506-392-6022
Buffalo - Needs & Requirements of U.S. Buyers	Oct-95	Toronto	DFAIT	613-944-9474
Best of Canada - Trade Show	Oct-95	Chicago	MAPAQ	514-873-4410
Eastern Dairy-Deli-Bakery Association Show	Oct-95	Edison	MAPAQ	514-873-4410
World Dairy Expo	Oct-95	Madison	Manitoba	204-945-4490
Illinois Grocers	Oct-95	St. Charles	Ontario	416-326-3564
Ohio Grocers	Oct-95	Ohio	Ontario	416-326-3551
NACSS (Convenience Store)	15-Oct-95	Chicago	Ontario	416-326-3693
Eastern Dairy-Deli-Bakery Association Show	18-Oct-95	Edison	Ontario	416-326-3790
International Hotel/Motel & Restaurant Show	Nov-95	New York City	N.B.	506-397-6022
Private Label Manufacturers (PLMA)	Nov-95	Chicago	DFAIT	613-944-9474
NEBS to PLMA Show	Nov-95	Chicago	DFAIT	613-944-9474
National Food Brokers' Show	Dec-95	Chicago	DFAIT	613-944-9474
Seattle - How to Access U.S. Agri-food Market Info	Dec-95	Vancouver	DFAIT	203-443-1777
North American Seed Potato Seminar	Dec-95	Various	N.B.	506-453-2214
NFBA Show (National Food Brokers' Association)	Dec-95	New Orleans	Ontario	416-326-3790
Food Marketing to Disney World	Jan-96	Florida	DFAIT	404-577-6810
Potato Marketing Association of North America	TBD	Various	N.B.	506-392-6022
Introduction to Disney World	Jan-96	Florida	DFAIT	613-944-9474
Boston - Best of Canada	Feb-96	Boston	DFAIT	617-262-3760
Chef de Cuisine - Trade Show	Feb-96	Minnesota	DFAIT	612-333-4641
National Food Distributors - NFDA Show	Feb-96	Orlando	DFAIT	613-944-9474
NEBS to Boston Solo Food Show	Feb-96	Boston	DFAIT	613-944-9474
Best of Canada Trade Show - Lombardo's	Feb-96	Randolph	MAPAQ	514-873-4410
North American Fur Auctions	Feb-96	Lyndhurst	N.S.	902-893-6388
Upper Midwest Hospitality Show	18-Feb-96	Minneapolis	DFAIT	612-333-4641
Buffalo - Solo Food Show	Mar-96	Buffalo	DFAIT	716-852-1247
Natural Products Expo West	Mar-96	TBD	DFAIT	613-944-9474
International Boston Seafood Show	Mar-96	Boston	MAPAQ	514-873-4410
International Fancy Food (West)	03-Mar-96	San Francisco	DFAIT	213-687-7432
Natural Products Expo West	14-Mar-96	Anaheim	DFAIT	213-346-3267
International Fancy Foods (East)	Jun-96	New York	DFAIT	905-893-6388

## Asia-Pacific

### *Regional Overview*

The countries of the Asia-Pacific region are characterized by a wide range of economic and market conditions. As a region, however, it can be described as a huge and growing food market, with growth being led by value-added food products. Canadian agri-food exports to the region exceed \$3 billion, representing approximately a 4-percent market share. Grains constitute approximately 50 percent of these exports; oilseeds account for 23 percent; and meats, hides and other products make up the balance. Growth in Canadian exports of value-added products is not keeping pace with growth in the market.

Not surprisingly, the Asia-Pacific region is a more important market for Western Canada than for Eastern Canada in agri-food products. It ranks first for British Columbia and Alberta; second for Saskatchewan and Manitoba; third for Quebec, Nova Scotia and Newfoundland; and fourth for Ontario, New Brunswick and Prince Edward Island. Targets are Japan, Taiwan, the Republic of Korea, Hong Kong, China and the Association of Southeast Asian Nations (ASEAN) — Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

Based on accessibility and size, the Asia-Pacific markets can be grouped into three categories: established, intermediate and long-term.

The established markets include Japan, Taiwan, Hong Kong, Singapore, Australia and New Zealand, of which Japan is by far the largest. For these markets, the focus will be promotional activities such as solo shows featuring specific products. Although bulk commodities will not be neglected, the emphasis will be on higher value (e.g. meat) and value-added products (e.g. processed foods and consumer-ready products). There will be an evaluation of corporate and distribution linkages radiating from Singapore, Hong Kong and Taiwan to determine the key entry points for specific products.

The intermediate category includes countries that have emerging economies or are on the verge of liberalizing their markets.<sup>2</sup> Market access and sales of value-added products should be possible by the year 2000. Countries in this group include the Republic of Korea (soon moving to the established category), China, India, Thailand and Malaysia. Government efforts will focus on improving access to these markets. The approach will be to promote Canada as a supplier of primary agricultural products as well as a source of high-quality food products. Although there is a growing demand for processed foods, these countries prefer to add as much value domestically as possible.

The long-term category includes countries with severe economic and development difficulties that are not expected to be overcome by the year 2000. In these markets, in addition to prospects for sales of grains and oilseeds, there are immediate opportunities to improve the domestic agricultural sector by offering such products and inputs as animal genetic material, technology and consulting services. Development projects should be pursued under the Canadian International Development Agency (CIDA). Projects financed through international financial institutions such as the Asian Development Bank and the World Bank should be pursued more intensely.

The nature of government support for Asia-Pacific is changing rapidly. This is partially in response to changing industry needs and priorities and partially in response to financial restraints. Generally, the emphasis is on market information and intelligence, as well as getting companies export ready. The focus will be on companies, and groups of companies, that have done strategic export market planning.

In the Asia-Pacific region, targeted promotions such as solo food shows are more cost effective than major national shows. Follow-up missions to targeted markets are preferred over a diverse range of exploratory missions. All participants require advance notice, and adequate preparation and follow-up is essential.

### *Trade Policy Issues*

Although the Government is responsible for negotiating market access, industry input is required to direct our efforts to commercially feasible issues. There are two priorities in the Asia-Pacific region. The first is ensuring fair tariff treatment for Canadian products such as canola seed, oil and meal that compete with products like soya. The second is negotiating plant and animal health protocols in countries where industry has identified market potential. When Taiwan and China join the WTO, as they are negotiating to do, access for Canada's agri-food products should improve in these markets.

### *Market Opportunities*

#### *Processed Foods and Beverages*

The countries that offer the best opportunities for processed foods and beverages are Japan, Taiwan, Hong Kong, Singapore and Australia. For the highly competitive markets, larger companies are able to promote brand-name retail products, but most SMEs cannot afford the necessary promotional efforts. Hotels, restaurants and institutions are alternative markets, particularly for meats. In general, Canadian companies can fill specialty

niches for health foods, fruit juices, ice wines and ice beers. French-fried potatoes, confections and cookies are other products with potential.

#### *Livestock and Genetic Materials*

In the Republic of Korea, opportunities exist for dairy cattle and elk. This is a good time to export dairy cattle to Taiwan, as that country is unable to import from the United States. There is also a demand for swine genetic material in Taiwan, and health protocol negotiations are under way. China has a demand for livestock and genetic material, but commercial shipments have had mixed success in meeting health requirements for imports. Malaysia and Thailand have been identified as markets for dairy genetic material and livestock, but these markets are price sensitive.

#### *Crops*

China, the Republic of Korea, Taiwan and Japan not only are major markets for grains and oilseeds, but also offer opportunities for specialty crops such as food-grade soya beans. Japan, Taiwan and the Republic of Korea are also major markets for alfalfa products.

Activity	Date	Location	Dept.	Contact
<b>Asia-Pacific South</b>				
Foodex Japan & Consular Solo Shows	08-Mar-95	Japan	Ontario	416-326-6809
Canada Food Fair - Mission to Singapore	Apr-95	Singapore	DFAIT	613-996-5824
Canadian Food Promotion in New Zealand	Apr-95	Aukland, Wellington, Christchurch	DFAIT	613-996-5824
India Market Strategy	Apr-95	New Delhi	DFAIT	613-996-5903
Trade Mission Processed Foods & Reconnaissance	15-Apr-95	Korea, Taiwan, Philippines	Ontario	416-326-6809
Incoming Food Buyers' Mission from the Philippines	May-95	Montréal, Toronto, Alberta, Vancouver	DFAIT	613-995-7659
Consumer & Food Buyers' Mission from Indonesia	May-95	Vancouver, Winnipeg, Toronto, Montréal	DFAIT	613-992-0959
ASEAN Food Executives' Mission to Canada (also FMI)	May-95	Toronto, Montréal, Vancouver	DFAIT	613-996-5824

Activity	Date	Location	Dept.	Contact
Food Buying Mission of Hong Kong Buyers	Jun-95	Canada	DFAIT	613-995-6962
Franchisers' Mission to Manila	Jun-95	Manila	DFAIT	613-996-5824
Feed Grain Seminar	Jun-95	Manila	DFAIT	613-995-7662
Tobacco Outgoing Mission	Jun-95	Viet Nam	Ontario	416-326-3564
Trade Show - Agro Viet Nam	20-Jun-95	Ho Chi Minh City	Ontario	416-326-6809
Boat Quay Canadian Food Promotion	Jul-95	Singapore	DFAIT	613-996-5824
Agri-food Mission from Southeast Asia	Aug-95	Canada/Various	DFAIT	613-995-7662
IMFEX and Halal Food Conference	16-Aug-95	Singapore	DFAIT	613-996-5824
Incoming Meat Inspection Mission from Philippines	Sep-95	Ontario, Alberta, B.C.	DFAIT	613-995-7659
Canadian Food Promotion	Sep-95	Kuala Lumpur	DFAIT	613-996-5824
Biotechnology Mission to India	Sep-95	India	DFAIT	613-996-5903
Food & Hotel China '95	Sep-95	Shanghai	Ontario	416-326-6809
FMI - Plus Processed Foods Promotion	18-Oct-95	Hong Kong, Guangdong	Ontario	416-326-6809
Beef Cattle Mission	Nov-95	Alberta, Sask.	DFAIT	613-995-6962
Halal Inspection Mission	Nov-95	Calgary, Toronto, Montréal	DFAIT	613-996-5824
Outgoing Mission	05-Nov-95	India, Pakistan	Ontario	416-326-6809
Food Fair Festival	Jan-96	Bangkok	DFAIT	613-995-7662
Food Sector Promotion/Canada Food Fairs	Jan-96	Jakarta, Surabaya	DFAIT	613-992-0959
In-Store Food Fair Festival	Jan-96	Bangkok	DFAIT	613-995-7662
ASEAN Beef & Seafood Promotion (+beverages)	Mar-96	Asia/Various	DFAIT	613-996-5824
Food & Hotel Asia (attendance only)	Mar-96	Singapore	DFAIT	613-996-5824

### East Asia

Food Promotion	TBD	Seoul, Pusan	DFAIT	613-996-7582
Mission to Viet Nam	TBD	Viet Nam	Manitoba	204-945-4490
Incoming Vietnamese Mission - Dairy/Swine	TBD	Toronto	Ontario	416-326-3481
Opportunities for Exporting Agri-food Products to China	Ongoing	Vancouver	DFAIT	613-996-6987
Meat Cutting Seminar	Jan-95	Hong Kong	DFAIT	613-995-6962
Food & Beverage Promotion with Grocery Stores/Restaurants	Jan-95	Hong Kong	DFAIT	613-995-6962
Agricultural Access for Korea, Taiwan, Indo China	Apr-95	Seoul	DFAIT	613-996-7582
Korea's Post-Uruguay Round Market	Apr-95	Seoul	DFAIT	613-995-8744
Product Validation Mission (International Food Technology '95)	Apr-95	Seoul	MAPAQ	514-873-4410
Seoul Food '95	10-Apr-95	Seoul	DFAIT	613-995-8744
Hofex '95 Fair	May-95	Hong Kong	DFAIT	613-995-6962
Peat Moss Mission from Taiwan	May-95	Canada	DFAIT	613-996-7582



Activity	Date	Location	Dept.	Contact
Processed Food Association Mission from Taipei	Jun-95	Western and Central Canada	DFAIT	613-996-7582
Taipei International Food Industry Show	Jun-95	Taipei	DFAIT	613-966-7582
National Agricultural Co-operative Federation Mission from Korea	Jun-95	Quebec, Ontario, N.B.	DFAIT	613-996-7582
Commercial Mission to Korea (Solo Food Show at Embassy)	Jun-95	Seoul	MAPAQ	514-873-4410
Meat Mission - Incoming Mission from Korea	Jul-95	Ontario, Quebec	DFAIT	613-995-8744
Food Expo Shanghai '95	Sep-95	Shanghai	DFAIT	613-992-7256
Buyers to Forage Summit (Alfalfa) from Taiwan & Korea	Sep-95	Edmonton, Saskatoon	DFAIT	613-995-8744
National Animal Quarantine Service - Mission from Korea	Sep-95	Western Provinces	DFAIT	613-996-7582
Food & Hotel China 1995	Sep-95	Shanghai	MAPAQ	514-873-4410
Food Promo with Dak Chong Hong	Oct-95	China	DFAIT	613-996-7256
Incoming Chain Store Mission from Korea	Nov-95	Vancouver, Toronto, Montréal	DFAIT	613-995-8744
Beef Recipe/Cooking Contest	Dec-95	Taipei, Taichung, Kaoh	DFAIT	613-996-7852
Dairy Genetics R&D JV Project	Dec-95	East Asia	DFAIT	613-996-7852
Special Crop Technical Seminar	Jan-96	Taiwan	DFAIT	613-996-7582
Canola Oil Promotion	Feb-96	Taiwan	DFAIT	613-996-7582
Flour Outgoing Mission to Taiwan	Feb-96	Taipei	DFAIT	613-996-7582
Guangzhou International Food & Packaging Show	Mar-96	Guangzhou	DFAIT	613-992-7256
Pet Food/Product Mission from Taiwan	Mar-96	Canada	DFAIT	613-996-7582
Swine Mission - Incoming Mission from Korea	Mar-96	Western Provinces	DFAIT	613-995-8744
AGRO CHINA '96	Apr-96	Beijing	DFAIT	613-996-7256
Seoul Food '96	Apr-96	Seoul	DFAIT	613-995-8744

## Japan

Follow-up Japan Mission - Mission to Foodex	Mar-95	Japan	B.C.	604-844-3156
Canadian/Japanese Company Product Demos	Apr-95	Japan/Various	DFAIT	613-992-6185
Menu Development - Canada Food Program	Apr-95	Tokyo, Nagoya, Fukuoka	DFAIT	613-992-6185
Canada Food Fairs	Apr-95	Japan/Various	DFAIT	613-992-6185
Pacific 2000 Key Sectors - Beef & Pork	Apr-95	Tokyo	DFAIT	613-992-6185
Bovine Genetics Business Plan	Apr-95	Tokyo	DFAIT	613-992-6185
Dehy Alfalfa Market Development	Apr-95	Tokyo	DFAIT	613-992-6185
Annual Canadian Culinary Competition	Apr-95	Tokyo	DFAIT	613-992-6185
Regional Food Market Analysis	Apr-95	Tokyo	DFAIT	613-992-6185
Food Buyers' Mission from Fukuoka	Apr-95	Canada/Various	DFAIT	613-992-6185
Solo Food Show	Apr-95	Fukuoka	DFAIT	639-992-6185

Activity	Date	Location	Dept.	Contact
Food Service Trade Show	Apr-95	Tokyo	DFAIT	613-992-6185
New Food Business Development	Apr-95	Osaka	DFAIT	613-992-6185
Food Product Seminars	Jun-95	Nagoya	DFAIT	613-992-6185
Chef Seminars (Series)	Sep-95	Osaka	DFAIT	613-992-6185
Culinary Competition - Promotion	Jan-96	Osaka	DFAIT	613-992-6185
Food Buyers' Mission from Nagoya	Feb-96	Canada	DFAIT	613-992-6185
Foodex '96	Mar-96	Makuhari	DFAIT	613-992-6185
Solo Food Show	Mar-96	Osaka	DFAIT	613-992-6185

## Latin America and Caribbean

### *Regional Overview*

The 19 Latin American and 18 Caribbean countries have a population of 454 million people. In 1992, the region imported agri-food products worth \$21 billion, of which Canada's share was more than \$1 billion. Oilseeds and grains, chiefly wheat, dominate our trade — 80 percent of our exports to South America and 60 percent of our exports to Central America and the Caribbean.

The economic conditions in these countries vary, but most are moving toward market-driven economies. Trade integration is happening at a fast pace, and the gross domestic product (GDP) is growing more quickly in these countries than in other Western industrialized nations.

Industry, the provinces and the federal government consistently view this region, particularly Mexico, as offering significant and growing market opportunities. There are opportunities for exporters in all regions of Canada. The objective is to increase the exports of value-added food products to take advantage of the purchasing power of the growing middle- and high-income consumers in the region and, at the same time, to support the continuing and growing market for Canadian grains and oilseeds and their bulk products where they have a competitive advantage.

Miami is an important gateway for the distribution of processed foods in the region. This should be kept in mind when market development strategies are being formulated.

The Latin American and Caribbean countries can be divided into three groups: major markets, emerging markets and minor markets.

Mexico is the major market, but Brazil, Venezuela and Colombia are fast becoming major destinations for Canadian agri-food exports. Argentina and Chile should also emerge as part of this group because their economic performance is outstanding and they have a growing middle class — potential consumers of high-value food products.

The emerging markets are Costa Rica, Panama, Peru, Ecuador and Cuba. The rest of the South and Central American countries and the Caribbean are minor markets.

### *Trade Policy Issues*

Extensive policy reforms and trade integration under way in the region will modify historic trading patterns. There are currently 16 trade agreements, involving virtually all the major markets for Canadian agri-food products. Expanding free trade through the NAFTA will benefit the Canadian agri-food industry. Stimulated by the debt crisis of the 1980s and the success of the NAFTA and the European Union (EU), many Latin American countries are preparing to negotiate free trade agreements. Income growth will accelerate, and with increasing population, these countries will tend to exploit the agricultural sector where they have an advantage. However, these reforms may be slowed or reversed because of public reaction to unemployment and other

adjustment problems associated with such agreements. Trade barriers, mainly non-tariff barriers, could rise again to protect employment in infant industries or those considered a national priority.

### **Market Opportunities**

There are 50 million middle- to high-income people concentrated in 40 major centres, a huge potential market for Canadian value-added foods. Another 200 million people living in urban centres could provide a continuing market for Canadian agri-food commodities and low-priced grocery products.

The opportunities identified are based on the views of the provincial and federal agencies that support the international trade initiatives of industry.

### **Processed Foods and Beverages**

Mexico is the largest market in the region for processed foods and beverages. Good opportunities exist for Canadian manufacturers of processed food, particularly for high-quality, deli-type cold cuts, frozen prepared meals, microwaveable entrees,

and biscuits and crackers. Brazil, Argentina and Colombia are emerging markets.

### **Livestock and Genetic Materials**

Exports of livestock genetic material to all the key markets in the region can be expanded. Specifically, the demand for dairy and beef genetic material is high in Mexico, Argentina, Brazil and Colombia and medium to low in Venezuela and Uruguay. Swine genetic material is a high priority in Mexico.

### **Crops**

The Latin America and Caribbean region is a major market for wheat and barley malt and constitutes the largest market for Canadian seed potatoes. Canada will continue its efforts to remove access barriers to seed potatoes. Industry also plans to expand the market for blueberries and flax.

The Canola Council of Canada sees Mexico as a high-priority market for canola seed. Special crops such as beans and other pulses are also a high priority in Mexico, a medium priority in Colombia, and a low priority in Cuba and Venezuela.

Activity	Date	Location	Dept.	Contact
<b>Latin America and the Caribbean</b>				
Incoming Food Buyers from Latin America	TBD	New Brunswick	N.B.	506-453-2214
Expo of the Americas - Trade Show	10-Jan-95	Mexico	Ontario	416-326-3767
New Exporters' Mission to Expo of the Americas	10-Jan-95	Mexico	Ontario	416-326-3767
Outgoing Seed Potato Mission to Cuba	Feb-95	Havana	N.B.	506-453-2214
Ministerial Potato Mission	Feb-95	Mexico	N.B.	506-453-2214
Foodservice Mission	15-Feb-95	Caribbean	Ontario	416-326-3767
Commercial Mission to Argentina and Chile	Apr-95	Buenos Aires	MAPAQ	514-873-4410
Mexico Information Studies	Apr-95	Canada	DFAIT	613-996-8625
Tecnotour '95	May-95	Havana	N.B.	506-453-2214
Incoming Seed Potato Buyers from Latin America	May-95	New Brunswick	N.B.	506-453-2214
Tremplin Mexico - Following Mission	Jun-95	Mexico City	MAPAQ	514-873-4410
Agro Expo - Fair	Jul-95	Bogota	DFAIT	613-996-5548
Incoming Seed Potato Buyers from Latin America	Jul-95	New Brunswick	N.B.	506-453-2214
Asach Show and Trade Mission	31-Jul-95	Chile, Colombia, Argentina	Ontario	416-326-3767

Activity	Date	Location	Dept.	Contact
Tremplin Mission - Brazil	Sep-95	Sao Paulo	MAPAQ	514-873-4410
National Swine Congress	Oct-95	Mexico	DFAIT	613-996-8625
Solo Food Show	Oct-95	Mexico City	DFAIT	613-996-8625
Canadian Table Top Show	15-Oct-95	Mexico	Ontario	416-326-3767
Mission to Canada Food Expo - Miami Conference	Nov-95	Miami	DFAIT	613-943-8807
Havana International Trade Fair	Nov-95	Havana	N.B.	506-453-2214
Commercial Mission to Mexico - Show	Nov-95	Mexico	MAPAQ	514-873-4410
ANTAD EXPO '96	Feb-96	Guadalajara	DFAIT	613-996-8625
Foire agricole de David	Mar-96	David, Panama	DFAIT	613-996-6129
New Exporters to Mexico	Mar-96	Mexico/Various	DFAIT	613-996-8625

## Europe

### Western Europe

The 15-member European Union (EU) has recently expanded, and could grow to as many as 19 countries with a population of 370 million, controlling more than 40 percent of total world trade (all sectors). Europe is a large, affluent, sophisticated market, with a high level of competition in most sectors.

In 1993, total EU imports of agri-food products exceeded \$200 billion. Of this, slightly more than \$1 billion was from Canada (45 percent more than in 1991). The balance of agri-food trade consistently favours the EU. The recent conclusion of the GATT should improve our access in a number of sectors, including fresh and processed fruits and vegetables, meat, whisky, beer, wheat and canola.

The United Kingdom imports more agri-food products than most nations, although under the EU's Common Agricultural Policy (CAP) reform it is becoming more self-sufficient. Despite recent gains in Canadian exports of bovine semen, honey, cheese, maple products, bakery mixes and pet food, there is a downward trend in exports of wheat, apples, whisky and frozen corn.

Germany is the world's largest net agri-food importer and provides growth opportunities in oilseeds, vegetable oils, pulses, bovine semen, maple syrup products and whiskies. A joint promotional program between the Canadian government and Germany's major food-distribution chain (Tengelmann) should increase sales of Canadian agri-food products in the German retail food sector.

Canadian exports to France almost doubled in 1993, mainly because of increased oilseeds exports. There are market opportunities for horse and bison meat, pulses, edible offal and pet food.

Italy is a steady market for Canadian durum wheat, pulses, horse meat and seed potatoes. There are market opportunities for bovine semen, canary seed and whisky.

### Eastern Europe

The recent establishment of democracies, privatization and market economies in Eastern Europe is providing trade opportunities — a growing middle class wants to become more "Westernized" quickly.

The main markets for Canadian agri-food are the Czech Republic, Hungary and Poland, with a combined population of 75 million people. In



these countries, the average annual growth in GDP is 2.5 percent. Canada's agri-food exports to these three countries totalled \$70 million in 1993. They are trying to join the EU and are harmonizing their policies accordingly. They can offer a gateway for Canadian commodities and value-added food products into other central and eastern European countries.

A Canadian priority is to help with technology transfer through DFAIT's Technical Assistance Program. Lines of credit from the Export Development Corporation (EDC) also assist in market penetration. There is a potential market for beef, dairy, poultry and swine genetic materials, coupled with production management support. Possibilities for commodity exports include wheat, corn, barley, beans, peas, canola, animal feed, tobacco and seed potatoes. Processed and semi-processed food, including meat, fruit, vegetables and dairy products, should also do well.

### ***Trade Policy Issues***

Extensive policy reforms and trade integration are under way in Western and Eastern Europe. The reduction of tariffs and non-tariff barriers through recent GATT agreements offers opportunities for Canadian agri-food exports. The reduction of import measures will lead to improved access for horticultural products, processed fruits and vegetables, pork, whisky, beer, wheat and canola. Canada is consulting with the EU to improve access for Canadian quality wheat, cheese and beef.

### ***Market Opportunities***

#### ***Processed Foods and Beverages***

The EU presents good opportunities for beverages and processed food, especially frozen fruit, berries, vegetables, maple syrup, cheese, specialty meats and honey.

### ***Livestock and Genetic Materials***

Market opportunities exist for animal genetic materials, pork and pork products, other red meats, horsemeat and other non-traditional meats.

### ***Crops***

Crops in demand include seed potatoes, dehydrated alfalfa, grains, animal and poultry feeds, and canola seed. There are also markets for blueberries, Saskatoon berries, nursery products, wild rice, peas and lentils.

### ***Former Soviet Union***

The Government of Canada has targeted three countries in the former Soviet Union (FSU) — Russia, Ukraine and Kazakhstan (total population 220 million people) for agri-food exports. During the current transition to a market economy, Canadian agri-food exporters should try to fill the large and growing demand for consumer food products, particularly in Russia.

Canada, the United States and the EU have all seen exponential growth in exports of their processed agri-food products to Russia since 1991. Russia's demographic and economic importance (population 150 million people) in the region makes it the most favourable market in the long term. Declining grain imports have been partially offset by significant growth in meat, poultry and chocolate imports (in 1993, Canadian agri-food exports to Russia were worth \$126 million, of which \$51 million was for non-grain products). The main features of the market today are a burgeoning demand and limited brand loyalty. Market development at this stage will reap future dividends.

### ***Trade Policy Issues***

Some of the republics of the FSU have applied for membership in the GATT. Negotiations are accelerating but an examination of these countries' trade regimes, and changes to them (i.e. Estonia, Latvia, Russia, Ukraine) will take time. Not only

will this provide for market disciplines and increased economic stability within these markets, it will increase opportunities for Canadian exports and investments in many sectors including agriculture. Russia is by far the most advanced in negotiations to join the GATT.

### **Market Opportunities**

#### *Processed Foods and Beverages*

Confectionary items, baby food, pet food, alcoholic beverages and mineral waters can be exported to this region. Honey, frozen berries, and fried and

dehydrated potatoes are other possibilities. Canada already exports maple syrup and fresh lobsters to Russia.

#### *Livestock and Genetic Materials*

Opportunities continue to exist for animal genetic materials, and also for pork and beef.

#### *Crops*

In addition to wheat, there are markets for peas and seed potatoes. Canola, all seeds, and technology for seed crushing continue to provide real opportunities.

Activity	Date	Location	Dept.	Contact
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Outgoing Mission	Jan-95	Central Europe	Ontario	416-326-3692
Canada Food Fair - Promotion	Apr-95	London	DFAIT	613-996-2147
<b>Western Europe</b>				
New Exporters to Western Europe	TBD	Various	DFAIT	613-995-9403
Incoming Mission - Potato Marketing Board from Europe	TBD	New Brunswick	N.B.	506-392-6022
Regional Shows (Maple)	TBD	France	N.B.	506-453-2214
Incoming Food Buyers' Mission - Europe	TBD	Toronto	Ontario	416-326-3693
London Wine Fair	TBD	London, England	B.C.	604-844-3156
Processed Food - U.K. Team Mission - Outgoing Mission	03-Mar-95	U.K./Various	B.C.	604-844-3156
Helix Show & Mission & Solo Reconnaissance Mission	Apr-95	Birmingham, Sweden, Spain	Ontario	416-326-3692
The 9th International Food & Drink Exhibition (IFE)	23-Apr-95	London	MAPAQ	514-873-4410
Private Label Europe Show & Mission	May-95	Amsterdam, U.K., France, Belgium	Ontario	416-326-3692
Outgoing Livestock Mission - Royal Show	Jun-95	London	N.B.	506-453-2214
Western Canada Farm Progress Show	TBD	Regina	DFAIT	613-996-2147
Market for Specialty Meats Study & Seminar	Jul-95	Western Europe	Ontario	416-326-3692
Market Development Mission	Jul-95	Russia, Ukraine, Baltic	Ontario	416-326-3692
ANUGA	Oct-95	Cologne	DFAIT	613-996-2147
Product Assessment Testing	Oct-95	Western Europe	Ontario	416-326-3692
Canadian Food Festival - Solo Fair	Nov-95	Brussels	DFAIT	613-996-7544
Agribition Farm Show - Incoming Buyers from Various Markets	TBD	Regina	DFAIT	613-996-2147
Market for Nursery Products Study & Seminar	Nov-95	Western Europe	Ontario	416-326-3692

## Middle East

A strong economy based on oil and gas production provides a large, stable agri-food market with a strong potential for steady growth in the Middle East. The current tariff structure in most countries is favourable to agricultural imports. The 15 countries of the region have a total population of 146 million people and total agri-food imports of \$22 billion. Canada's agri-food exports to the region are worth \$344 million (1.5 percent of the market). The Gulf Co-operation Council (GCC), whose members are Bahrain, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates, imports 65 percent of the Canadian agri-food going to the region. A market in one country can act as a springboard to others in the GCC.

Most Middle Eastern countries have accepted the fact that they are unable to grow enough of their own food on an ongoing basis. Because of this, they are rethinking their international trade policies. Most countries now wish to break the market hold of a few foreign exporters. This trend to diversifying sources of supply should provide increased opportunities for Canadian agri-food exporters.

Our priorities are to maintain market share in grain and to increase and diversify our commodity trade to include canola oil, beef, poultry, animal feeds, seeds, special crops and processed foods. Canadian agri-food firms should position them-

selves for trade in value-added products and the sale of agricultural technology and services. Key markets are Saudi Arabia, Iran, United Arab Emirates and Kuwait.

### *Trade Policy Issues*

The current tariff structure in most Middle Eastern countries is favourable to agri-food imports. Many of these countries have signed the GATT, and most of the ones that have not signed have applied for membership. This recent trend, coupled with new GATT requirements, should result in improving access for Canadian agri-food products.

### *Market Opportunities*

#### *Processed Foods and Beverages*

Baby food, confectionery items (chocolates, baked goods) and honey are in demand.

#### *Livestock and Genetic Materials*

Beef and poultry meat, breeding stock and genetic materials are good prospects. Because of religious beliefs, however, the meat sector is difficult to penetrate.

#### *Crops*

There is significant interest in canola oil, special crops (lentils, peas, beans), seeds (potato, alfalfa) and barley.

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
2nd International Agricultural & Food Fair	May-95	Tehran	DFAIT	613-944-7039
International Grain Industry Program - East Africa Participants	May-95	Winnipeg	DFAIT	613-944-6586
Trade Mission	28-May-95	South Africa	Ontario	416-326-3767
Agri-food Industry Mission to Morocco	Jun-95	Casablanca	DFAIT	613-944-0396
Incoming Farm Equipment Mission	Jun-95	Regina	DFAIT	613-944-7029
Market Development Mission	Sep-95	Middle East	Ontario	416-326-3767
Agri-food Processing Equipment Mission from Africa and Middle East	Oct-95	Toronto, Montréal, Vancouver	DFAIT	613-944-7029
Saudi Agriculture '95	Oct-95	Riyadh	DFAIT	613-944-5984

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Department of Foreign Affairs  
and International Trade  
Trade Opportunity Strategy Secretariat  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 996-3537  
Fax: (613) 995-1103



## Agriculture and Food Products

Activity	Date	Location	Dept.	Contact
<b>Canada</b>				
Incoming Ginseng Buyers	TBD	Toronto	Ontario	416-326-3564
Incoming Buyers - Quarterama	Mar-95	Toronto	Ontario	416-326-3481
Japanese Chefs Training Program	Apr-95	Alberta	DFAIT	613-992-6185
Incoming Mission from Viet Nam	Jun-95	Canada/Various	DFAIT	613-995-8649
Bakery Showcase '95	Sep-95	Toronto	N.S.	902-893-6388
Hong Kong Mission to Canadian Agriculture Trade Show(s)	Dec-95	Canada/Various	DFAIT	613-995-6962
Apex - Trade and Incoming Buyers	Mar-96	Moncton, Halifax	N.S.	902-893-6388
<b>Multiple Markets</b>				
Incoming Food Buyers' Mission Emerging Markets	TBD	Toronto	Ontario	416-326-3551
PROFIT - Emerging Markets	Sep-95	Toronto	Ontario	416-326-3564
Royal Winter Fair 1995	Nov-95	Toronto	DFAIT	613-944-6590

Note: Dates and locations are subject to change.







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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

***1995/96***

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Aéronautique et pièces d'aéronefs.*



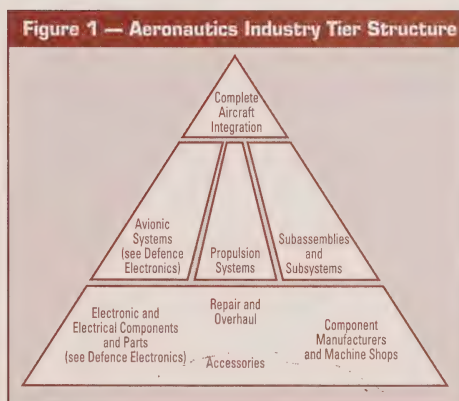
## Aircraft and Parts

The aircraft and parts sector comprises firms that design, develop, manufacture and/or market aircraft, aircraft systems, subsystems and parts, as well as those that provide support services such as repair and overhaul (R&O).<sup>1</sup>

As shown in Figure 1, the aircraft and parts industry has a three-tier structure. Aircraft manufacturers with a full systems-integration capability make up the first tier. Second-tier firms produce integrated systems, including propulsion systems, landing gear and major structural components such as wings, tail sections and fuselage sections. Third-tier firms manufacture aircraft parts and components and provide support services. First- and second-tier companies are often represented by local sales staff or agents in export markets, and are generally aware of market conditions and opportunities. Third-tier suppliers market to the first- and second-tier companies, as well as to end users.

The lines shown in this traditional depiction of the aircraft industry are beginning to blur, however, as airframe manufacturers demand that their suppliers assume responsibility for designing,

developing and manufacturing complete integrated systems, and that they share the financial risk of the aircraft program. This approach has broadened technological requirements, increased financial risks and given rise to issues of market access. The strategic response from systems suppliers wishing to offer integrated systems has been to form global partnerships or alliances with a number of subsystems manufacturers.



Source: Industry Canada

**Table 1 — Share of World Exports and Imports - 1992: Aircraft, and Associated Equipment and Parts**

Exporter	Share (%)	Importer	Share (%)
United States	40.7	United States	14.2
United Kingdom	17.6	France	13.0
France	12.3	Germany	7.6
Germany	10.7	United Kingdom	7.0
Canada	3.2	Japan	4.9
Italy	3.2	Canada	3.1
Netherlands	2.6	Netherlands	2.9
Japan	1.1	China	2.7
Spain	1.0	Republic of Korea	2.6
Belgium-Luxembourg	0.9	Italy	2.3
Sweden	0.7	Singapore	2.0
Switzerland	0.7	Australia	1.9
Former Soviet Union	0.7	Spain	1.6
Singapore	0.6	Saudi Arabia	1.5
Brazil	0.3	Taiwan	1.3
Denmark	0.3	Mexico	1.3
Israel	0.2	Thailand	1.3

Source: Statistics Canada, World Trade Databases on CD-ROM, 1980-91 and 1992, Aircraft and Associated Equipment and Parts. As statistics for aircraft engines are not normally included in this category, a special analysis was carried out to include engine data.

<sup>1</sup> Avionics is covered in the section entitled Defence Products.

## International Environment

In 1992, Canada ranked fifth in the world in exports of aircraft and parts, with a 3.2-percent share. Canada's aerospace output has been growing more rapidly than that of other leading aerospace countries since the mid-1970s (see Figure 2).

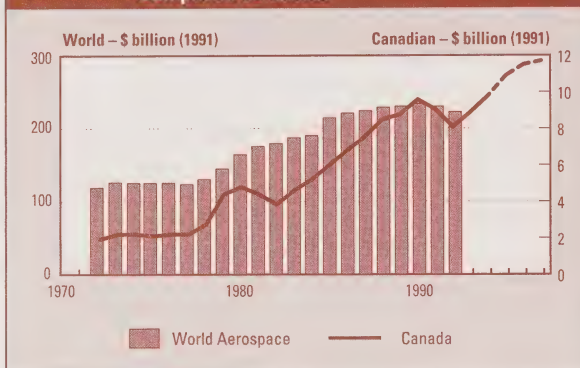
From 1989 to 1991, airlines and aircraft-leasing companies placed orders for new aircraft at an unprecedented rate. As a result of the decline in travel during the recession, airlines experienced enormous financial losses, and demand for new civil transports plummeted.

Observers continue to forecast strong underlying demand for civil transports over the next 15 years, although generally below the peak levels attained in 1991. In contrast to the long-term prospects for civil aircraft markets, however, the downsizing of the defence industry is expected to be permanent as the East-West arms race winds down. In previous business cycles, downturns in civil aerospace were buffered by defence spending. In the face of intense competition in both civil and defence markets, aircraft companies and their suppliers must become more efficient and cost-competitive, while maintaining their technological edge. This will require the formation of new relationships that were unfeasible previously, due to such factors as national security interests, competitive risks and protected technologies.

These factors are expected to lead to a major worldwide restructuring of the aircraft and parts industry. Restructuring is expected to be most profound in the highly fragmented regional aircraft-manufacturing industry, a segment in which Canada has a strong competitive position. Bombardier has led this restructuring with its acquisition of de Havilland and the integration of its Canadian operations into its international aerospace interests.

Many governments consider the aircraft industry to be particularly important to their economic and industrial policy, and therefore offer a

**Figure 2 — Canada's Aerospace Sector: Growth Compared to World**



Source: European Aerospace Industry: Trading Position and Figures 1994

range of direct and indirect support. In addition, governments of Eastern Europe, China and other countries often insist on industrial offsets or "localization" of production, in return for market access. Localization requirements can, in many cases, be satisfied by low-technology work, maintaining or increasing high-technology work in Canada by increasing market share.

Over the past year, several countries have provided equity or other special funding to maintain their aircraft industry in the face of financial losses. Several European countries have strengthened their indirect research and development funding for the aircraft industry, and the United States has initiated defence conversion programs aimed at "dual-use" (military/civil) technologies. During the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations, countries were unable to negotiate improvements to the 1979 Agreement on Trade in Civil Aircraft, which eliminated tariffs and limited offsets between signatory countries. Negotiations on the aircraft agreement were decoupled from the Uruguay Round agreement and are continuing.

International market prospects for the R&O subsector are generally better than for its manufacturing counterpart. In the short term, airline overcapacity is leading to storage of functional



aircraft. Used aircraft prices are declining as a result, providing a basis for economic conversion or upgrading of the aircraft to meet new environmental and safety regulations and improve operating costs. Over the longer term, the world's airline fleet is expected to grow substantially and the expanded fleet will require R&O support. In the United States, military R&O opportunities are expanding as military bases and repair centres are closing and R&O is increasingly being contracted out to the private sector.

The major area of growth in demand over the next few years is expected to be the Pacific Rim. British Aerospace, for example, predicts that defence spending in the Asia-Pacific region will overtake that of Western Europe and equal approximately two thirds of U.S. spending by 2010. Meridian International Research forecasts that the total market in the Asia-Pacific region from 1993 to 1998 will be in the range of 500 aircraft, of which 69 percent will be between 50 and 100 seats, and 23 percent between 25 and 40 seats. Many of these countries are also expected to use their foreign exchange surpluses to encourage the development of their aircraft and parts industries to meet growing demand. Securing market access may require local production, technology transfer or other industrial offsets.

China is expected to experience rapid growth in its gross domestic product (GDP), which will stimulate demand for air travel. However, constraints on the rapid expansion of China's aviation infrastructure are expected to slow the recent 30-percent annual growth rate in air travel to 16 percent between 1993 and 1999.

Former Warsaw Pact countries have advanced aircraft and parts technologies, along with highly skilled, well-trained, low-paid workers, technologists and engineers. However, their ability to organize, manage and market these assets competitively remains questionable. Russia's aircraft

industry is focussing on improving its aircraft to the standards required for certification in Western countries, and is eager to collaborate with Western firms that can assist in this effort. The most immediate opportunities in these countries are in technological collaboration, but more substantive trade opportunities are longer term.

## Canadian Position

The Canadian aircraft and parts industry exports 64 percent of its \$5.5-billion annual sales and employs approximately 40 000 people. In 1992, the aircraft industry's value-added performance was third among all Canadian manufacturing sectors, behind the motor vehicle and sawmill industries. The industry's success has been built on establishing "niches of excellence" in selected commercial and defence markets. This strategy has been applied in virtually every subsector in the industry.

Canada's aerospace<sup>2</sup> industry focusses primarily on civil markets, which accounted for 69 percent of its sales in 1992. Most of its foreign competitors depend on military markets for 50 to 70 percent of sales. Although Canada's aircraft and parts industry has not been as directly affected by declining defence budgets as those of its competitors, it is facing increased competition in civil markets as defence-oriented foreign aircraft and aircraft parts firms begin to redirect their production efforts.

Canada's aircraft and parts industry is internationally competitive. Since 1988, it has been one of the few Canadian high-technology industries to show a cumulative trade surplus. Indeed, in 1992, Canada was the only nation in the world to register a trade surplus with the U.S. in aerospace products.

The U.S. is the principal market for Canada's helicopters, fixed-wing aircraft, engines and engine parts, and aircraft parts and components, followed

<sup>2</sup> Based on aerospace data. The civil/military ratio is not available for aircraft and aircraft parts.



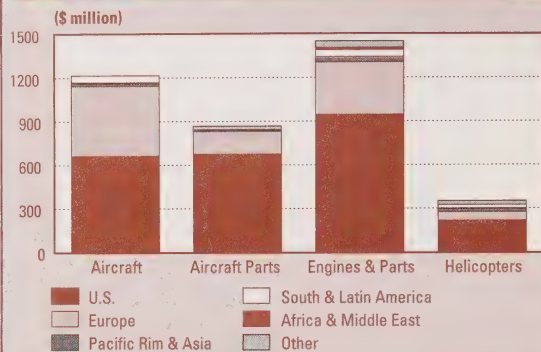
by Europe, particularly for engines and engine parts, and the Asia-Pacific region, which, although currently small, is an emerging market for Canada's fixed-wing aircraft and helicopters.

During 1993, exports of aircraft and engines resumed their growth, and helicopter exports rebounded after a small decline the previous year (see Figure 3). Exports of aircraft parts, however, continued to decline sharply, as the large aircraft industry, the primary market for Canada's aircraft parts manufacturers, continued to reduce production (see Figures 4 and 5).

Bombardier, the parent company of Canadair and de Havilland, is a major Canadian-controlled global aircraft manufacturer. Canadair and de Havilland have the largest world market share of deliveries and orders in 30- to 50-seat turboprops and jets. Canadair's Challenger is one of the best-selling large corporate jets in the world; this, together with the Learjet line, gives Bombardier the broadest product line of any business jet manufacturer. The company also manufactures and markets the CL-215T/415 water bomber, as well as military versions of this amphibian aircraft. In co-operation with international risk-sharing partners, Bombardier is developing a new long-range executive jet, the Global Express. It is also developing a new, longer-range, enhanced version of the Challenger, the 604, and, with its affiliated companies, Shorts and Learjet, the Learjet 45 business jet. Bombardier is working on a new high-speed turboprop, the Dash 8-400, and a 70-seat variant of the Canadair Regional Jet. In addition, it designs and manufactures advanced surveillance systems, including the CL-289 drone and the CL-227 Unmanned Air Vehicle, and manufactures large aircraft parts, under subcontracts, for civil and military markets.

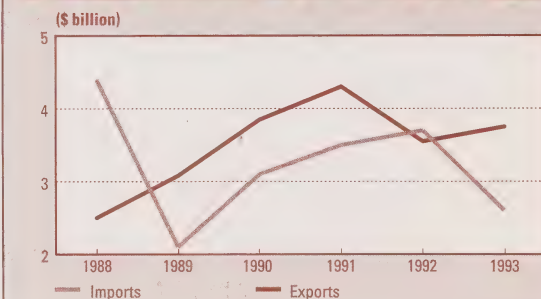
Bell Helicopter Textron (Canada) designs, develops, manufactures and markets Bell's entire line of civil helicopters, including the 206-BIII JetRanger, 206L-IV LongRanger and 206 TwinRanger light helicopters; the 230 intermediate twin helicopter; and the 212 and 412 medium lift helicopters. Bell is currently developing the 430

**Figure 3 — Canada's Aeronautics Exports, 1993**



Source: Midas System and Statistics Canada Catalogue 65-004

**Figure 4 — Aircraft and Parts Balance of Trade**

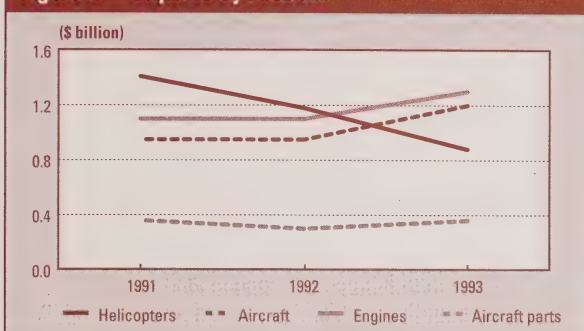


Source: Statistics Canada TIERS Data, HS Basis

intermediate helicopter and the 407L and 407LT light helicopters. It has almost 50 percent of the world commercial helicopter market for its products.

Pratt & Whitney Canada has a 30-percent share of the world market for small turbine engines (used by regional aircraft, general aviation, military utility/trainers and helicopters), and is well positioned to realize its goal of expanding that share to 40 percent in the coming decade. Its products include the PW100, PW200, PW300, PT6 and JT15D series of turbine engines and the PW900 series of auxiliary power units.

Figure 5 — Exports by Product



Source: Midas System and Statistics Canada Catalogue 65-004

Second-tier subsystems and subassembly manufacturers have a range of specialized capabilities. For example:

- Dowty, Menasco and Heroux design, develop and manufacture landing gear;
- Allied-Signal designs and manufactures engine controls and aircraft environmental systems;
- McDonnell Douglas Canada Limited produces the wings for all the Douglas Aircraft Company's large commercial aircraft and some military models, and is actively seeking to broaden its customer base;
- Boeing Canada manufactures composite airframe structures.

In the third tier, several smaller firms manufacture aeronautics components and/or subassemblies, primarily for domestic markets. A few highly specialized third-tier companies, such as Mecair (aerospace fasteners), Novatronics (aircraft position and motion sensors) and Aerosystems International (aircraft engine testers and monitors), are active exporters.

Canada's repair and overhaul subsector has sales ranging from \$1.6 billion to \$2 billion, and employs 12 000 to 14 000 people.<sup>3</sup> Exports are

lower than those of the aerospace industry as a whole, ranging between 25 and 30 percent, yet they play a significant role. Canada has a complete range of R&O capabilities, including aircraft re-engining, engine overhaul, refurbishing aircraft interiors, and aircraft modification and conversion services. Several firms have highly competitive capabilities for the repair, overhaul and support of specific military airframe platforms, such as the CF-5 and the CF-18. The sector is shared equally between aerospace firms and fixed- and rotary-wing aircraft operators. Through the Defence Production Sharing Arrangement/ Defence Development Sharing Arrangement (DPSA/DDSA), Canadian industry has an enhanced opportunity to access the U.S. military R&O market. Canadian R&O companies include: Rolls-Royce Canada (carrying out research and development [R&D] for the industrial version of the Trent engine in Canada), Hawker Siddeley (Orenda), Standard Aero, Bristol Aerospace, Heroux, Air Canada, Canadian Airlines International Limited, Conair, Kelowna Flightcraft, Field Aviation, IMP, Canadair and CAE Aviation. In addition, Conair and Canadair provide complete forest fire control systems and services to complement their firefighting aircraft.

Canadian firms also produce light general aviation aircraft, mostly for the private pilot, recreation and flying school markets. Many observers believe that there is a demand for these products because of safety issues and spiralling product liability costs. New certification requirements for factory-built light general aviation aircraft were introduced in Canada in 1993. New product liability legislation, which received presidential approval in the United States in August 1994, may both stimulate market growth and jeopardize Canada's lead in this market. A number of firms also produce ultra-light aircraft for the recreation market.

<sup>3</sup> The repair and overhaul industry is not well defined from a statistical perspective. Consequently, the data cited herein are estimates and reflect some duplication of aircraft and parts production and exports, as well as some elements of aircraft operators' sales.

The competitive strengths of Canada's aircraft and parts industry are rooted in its conversion from defence to commercial production during the 1960s, and the strong international focus that it developed to compensate for its limited domestic market. Through specialization, Canada's aircraft and parts industry has achieved a leadership position in some niche markets for specialized aircraft and systems, largely in commercial sectors. Many foreign firms are seeking to emulate Canada's success in penetrating foreign commercial aircraft and parts markets as their protected domestic defence markets shrink.

The federal government has fostered the growth of the industry through a stable, supportive policy environment. Industry Canada's (IC) Defence Industry Productivity Program (DIPP), which principally supports R&D projects, and its Industrial and Regional Benefits (IRB) program for defence procurements, have been key to the Government's support of the industry. Flexibility in export financing for aircraft and parts is also becoming increasingly important. In 1993, Canada's Export Development Corporation (EDC) provided \$1.6 billion in financing for the aircraft and parts sector (amounting to 40 percent of its 1993 signings).

## Strategic Direction

Canada's aircraft and parts industry will continue to face difficult challenges in the 1990s. Key among them are shrinking defence markets and highly cyclical commercial markets. Canadian firms are not as large as most of their international competitors, nor do they have protected domestic markets and direct government investment. Moreover, the industry faces new competition from countries that are developing their aircraft sectors as a key element of their industrial development strategy, and from technically proficient former Soviet Union (FSU) aircraft industries seeking to penetrate Western markets. In this environment, Canadian aircraft and parts firms will be challenged, more than ever, to maintain a

global view of their industry and to develop their strategies within this context. The strategic priorities for the industry are as follows:

### ■ Aerospace Industries Association of Canada (AIAC) Priority Countries

The AIAC continually reviews and updates a list of countries that will be targeted for sales support by Canada's embassies and consulates. The current list includes countries with indigenous aircraft design and/or manufacturing capability, and those with particular or expanding air transportation markets. In order of priority, the major markets are: the United States, France, Germany, United Kingdom, Commonwealth of Independent States, Italy, China, Japan, Korea, Taiwan and Turkey. Other prospective markets include Indonesia, Singapore, the Netherlands, Sweden and the Middle East. Market intelligence on the current and future aerospace plans of these countries is essential for Canadian aerospace companies to be able to compete.

Canadian missions abroad and provincial governments have expressed interest in pursuing Latin and South American markets. Government and industry will carry out a market review to ensure that development and support activities in these markets are effective (AIAC, Department of Foreign Affairs and International Trade [DFAIT], IC).

### ■ Marketing Support

In view of the close relationship between the aircraft industry and governments worldwide, embassies and consulates will provide aerospace companies with strategic marketing information and support on government-related issues.

Industry and government will co-operate to identify the nature, content, frequency, format and dissemination procedures for such information, and to implement appropriate processes (AIAC, DFAIT, IC).

### ■ Local Liaison with Key Contacts

Embassies and missions maintain contact with a limited number of key government agencies

or domestic prime contractors vital to this sector. These key contacts will be identified in co-operation with industry (DFAIT/missions, AIAC).

#### ■ Market Imperfections

Little progress is expected on a new GATT agreement on civil aircraft until the United States and the European Union break their current deadlock. Should negotiations begin again in earnest, the Government will consult closely with the aircraft industry in developing its negotiating position (DFAIT, IC, AIAC). In the meantime, embassies and consulates will monitor and report on international subsidy programs and non-tariff barriers (DFAIT/missions, IC).

#### ■ Monitoring Developing Technologies

Countries with established or rapidly emerging aircraft capabilities are developing new technologies that may affect Canada's aircraft industry, including:

- Artificial Intelligence,
- Robotic Systems,
- Surveillance Technology,
- Smart Sensors,
- Intelligent Structures,
- Smart Systems,
- New Person/Machine Interfaces,
- Fault Tolerant Electronic Systems,
- Optronics,
- Computational Fluid Dynamics,
- Computational Structural Mechanics,
- Lightweight Materials and Structures,
- Advanced Protective Coatings,
- Advanced Manufacturing Technologies, and
- Multidisciplinary Design and Optimization.

Industry and government will work together to develop and implement a monitoring and reporting process for key countries that focusses on these technologies. In addition, they will

consider the merits of forming strategic alliances with U.S., European and/or Japanese firms in these fields, and will recommend whether broadened intra-national research program collaboration would further their interests (AIAC, DFAIT, NRC, IC).

#### ■ New Long-term Markets

Prospects for growth in aeronautics are high in the People's Republic of China, and Canada's competitors are already active. Industry will explore opportunities for collaboration with Taiwanese and Japanese aerospace firms.

In the FSU and Eastern Bloc, the potential access to advanced technologies and, in the longer term, prospective markets, is balanced by the risk of pursuing unproductive, or very long-term opportunities. Missions will maintain a close watch on aerospace developments. DFAIT will continue to support business associations such as the CUBC, which forges business-to-business contacts between industries in the FSU and Canada (DFAIT, IC).

Missions will support the industry's efforts to penetrate Middle Eastern markets to take advantage of opportunities to market helicopters, regional aircraft, executive jets (particularly the Global Express), repair and overhaul, and support services (DFAIT/missions).

In each of these new long-term markets, the primary role for embassies and consulates will be to provide market intelligence and to arrange for ministerial support (DFAIT/missions).

#### ■ Strategic Alliances

As aircraft manufacturers are demanding fully integrated systems for new aircraft, forming strategic alliances with firms with complementary capabilities is becoming essential to offering systems solutions. In addition, strategic alliances are frequently necessary for market access in emerging new markets. The Government will support the efforts of companies, particularly small- and medium-sized enterprises (SMEs),



to form strategic alliances with aircraft and parts manufacturers, both domestic and foreign (IC and DFAIT).

#### ■ Repair and Overhaul

Embassies and consulates will continue to report major modification programs for military airframes and civil aircraft redesign or refurbishment programs. Particular emphasis will be placed on U.S. military markets and on matching Canadian industry strengths on specific airframe platforms and identified foreign market opportunities for these platforms (DFAIT/missions, IC).

## Promotional Activities

In view of Canada's stature as a world leader in aircraft and parts manufacturing, the Government will centre its promotional activities around a few strategically important international air shows as a showcase for Canada's capabilities. Specifically, it will be part of the consolidated Canadian presence at the Singapore and Paris (and, in alternate years, Farnborough) air shows. Aircraft and parts missions may be linked to these trade shows to enable SMEs to visit specific companies of interest. Support for other air shows and outgoing trade missions will be founded on specific aircraft marketing, development, conversion, or life-extension programs and similar targeted market opportunities. Airshow Canada, the leading North American air show, is a particularly important venue for Canada's trade development efforts, and will be used to provide an opportunity for foreign customers to travel on to visit Canadian firms to see their capabilities (DFAIT, IC).

While the Government will continue to support a limited number of these trade development activities, it also recognizes that, as the aircraft industry is becoming increasingly globalized, access to timely market and technology information worldwide is becoming more and more vital. Accordingly, as the processes to provide industry

with market and technology information become more fully developed (outlined in Strategic Direction), the Government will direct more of its resources to this effort (DFAIT, IC).

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Midas System and Statistics Canada Catalogue 65-004, *Aircraft and Aircraft Parts Trade*, Harmonized System (HS) Basis.

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Ottawa K1A 0G2  
Tel.: (613) 996-8086  
Fax: (613) 944-0050



## Aircraft and Parts

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Dubai Air Show 1995	Nov-95	Dubai	DFAIT	613-944-6983
<b>Canada</b>				
ASEAN Market Opportunities Seminar	11-Jun-95	Montréal	IC	514-283-4262
Airshow Canada '95 - Canada Stand	09-Aug-95	Abbotsford	IC	613-954-3748
<b>East Asia</b>				
Taipei Aerospace Technology Exhibition - National Stand	Jul-95	Taipei	DFAIT	613-995-8744
Airshow Canada '95 - Visitors from China and East Asia	09-Aug-95	Abbotsford	DFAIT	613-995-6962
<b>Multiple Markets</b>				
Airshow Canada - Visitors from Latin America	09-Aug-95	Abbotsford	IC	514-283-8883
<b>United States</b>				
Mission to Werner-Robbins Air Force Base	Apr-95	Macon	DFAIT	613-944-9481
Mission to Defence Contractors	May-95	Los Angeles	DFAIT	613-944-9481
Advance Plan Brief for Industry	May-95	Chicago	DFAIT	613-944-9481
National Business Aircraft Association - National Stand	Oct-95	Atlanta	DFAIT	613-944-9481
USAF Plant Visits - Eastern Canada	Nov-95	Dallas	DFAIT	613-944-9481
Mission to U.S. Coast Guard	Nov-95	Atlanta, Philadelphia	DFAIT	613-944-9481
Canada Day - Wright Patterson Air Force Base	Jan-96	Dayton	DFAIT	613-944-9481
Heli-Expo '96	30-Jan-96	Anaheim	IC	613-954-3400
Mission to CASL	Feb-96	St. Louis	DFAIT	613-944-9481
CANEX '95	Feb-96	Philadelphia	DFAIT	613-944-9481
<b>Western Europe and European Union</b>				
MI/I Report - MR&O (Maintenance, Repair and Overhaul)	Jun-95	Dallas	DFAIT	613-944-9481
Airshow Canada - Visitors from Western Europe	09-Aug-95	Abbotsford	DFAIT	613-996-3607
Thessaloniki International Trade Fair - Info Booth	Sep-96	Thessaloniki	DFAIT	613-995-6435

Note: Dates and locations are subject to change.







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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

***1995/96***

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***An Integrated Plan for Trade, Investment  
and Technology Development***



**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries

15. Information Technologies and Telecommunications

- Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
    - Medical Devices
    - Pharmaceuticals
    - Health-Care Services
  17. Minerals and Metals
  18. Oil and Gas Products and Energy Equipment
  19. Power Equipment
  20. Primary/Secondary Industrial Machinery
    - Mining, Forestry, Pulp and Paper
    - Agricultural Technology, Machinery and Equipment
    - Ocean and Marine Shipboard Technology
  21. Rail and Bus Equipment
  22. Space
  23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Automobile.*



## Automotive

The automotive sector consists of car, truck and trailer assembly, manufacturers of tires, components, aftermarket/accessories, service equipment, and dealerships and garages.

### International Environment

The automotive industry serves a market of 48 million vehicles, produced by 28 assemblers worldwide. Japan and Southeast Asia produce approximately 17 million, Western Europe 15 million, and North America 12 million vehicles annually.

Supporting their activity is a supply base of 2500 tier-one parts manufacturers, 30 000 tier-two companies and over 200 000 tier-three companies. Tier-one suppliers provide full service, including research and development (R&D) and design-in engineering capabilities. Tier-two suppliers largely market their products and capabilities to tier-one companies, while tier-three firms are mainly suppliers of materials and services. Worldwide, there are over 50 000 automobile dealers and 500 000 repair shops.

During the economic slowdown in industrialized countries in the early 1990s, a few parts companies in Canada closed, but most restruc-

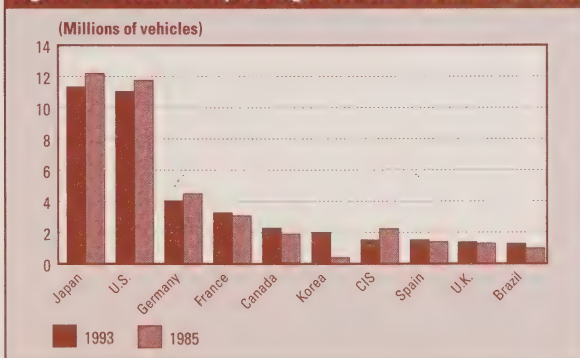
tured and have emerged stronger than ever. Auto makers also restructured on a global basis. Although the sector has made massive strides toward improving its competitiveness, there are those who believe that the global automotive restructuring is not yet over. Also, the industry is cyclical, and other downturns can be expected. As a consequence, global competition is likely to intensify for both parts companies and assemblers.

The shift in global market share from North America to Japan and Southeast Asia, which has occurred over the last 10 years, led to trade tensions especially among the United States, Europe and Japan. These are being addressed in a variety of ways.

International trade agreements are changing the comparative advantages of countries as tariffs are being driven down with each successive General Agreement on Tariffs and Trade (GATT) round and as regional free trade agreements are negotiated. It is expected that trade barriers will continue to be reduced, thus opening new markets and opportunities for Canadian firms, particularly in China, Eastern Europe and Latin America, and creating new pressures on multinational firms to consolidate operations.

The automotive industry is adjusting to the many challenges of globalization, shifts in production centres, changing tariff regimes, technological change, environmental and other regulations, and consolidation of supplier firms. As a result, manufacturers are under pressure to restructure, to reduce costs, and to increase competitiveness. North American assemblers have been focussing on their core business, resulting in the tier structure (noted above) in the parts industry, while multinational enterprises (MNEs) are forming strategic alliances to remain competitive. These developments are

Figure 1 — World's Top 10 Light Vehicle Producers in 1993



Source: Ward's, Automotive News

giving rise to a much more customer-focused industry, with quality, cost, delivery and customer service as the primary criteria for success.

The United States remains the most important market for the Canadian automotive industry, accounting for over 80 percent (\$36.6 billion in 1993) of total shipments of vehicles and parts. As a result of the Auto Pact (1965), the U.S. and Canadian automotive sectors are integrated. The Canada-U.S. Free Trade Agreement (FTA) and the North American Free Trade Agreement (NAFTA) remove barriers to trade among Canada, the United States and Mexico, further encouraging integration. Many Canadian companies tend to view the United States as part of their "domestic" market, as attention is being given to the new opportunities being created by the recent establishment of European and Japanese assemblers in the United States. The U.S.-Japan trade dispute continues to have the potential to distort sourcing, trade and investment decisions in North America.

In Japan, the last three years have been ones of retrenchment as the domestic market and corporate profit levels declined. Japan has not been immune to restructuring as companies seek lower costs and new markets. Japanese assemblers have been a powerful stimulus to the international restructuring process, establishing an important vehicle production base in North America (16 percent of total capacity), and a significant parts manufacturing base, mainly in the United States. In 1993, Japanese companies accounted for over 21 percent of the total light vehicle market in North America, which is down slightly from the year before. The Canadian automotive industry must develop a stronger relationship with the Japanese-owned automotive industry in order to obtain high levels of investment and sourcing in Canada. This requires maintaining a competitive business climate and aggressive promotion of Canadian capabilities.

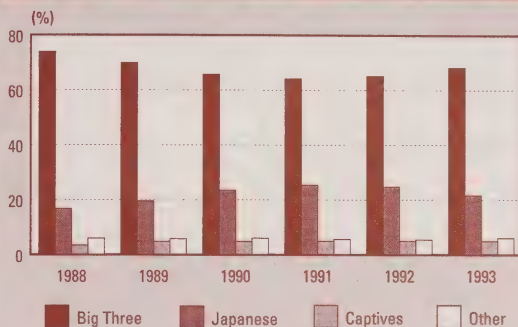
In Europe, the automotive market is undergoing global restructuring similar to that experienced in North America several years earlier, and although sluggish, European vehicle sales are showing signs of recovery. Japanese vehicle imports to Europe

are restricted until 1999. Europe overall has good potential for high-quality supply and new investments; however, Canadians will have to develop alliances and promote parts capabilities. German assemblers in particular are increasing their purchases of Canadian parts for worldwide operations.

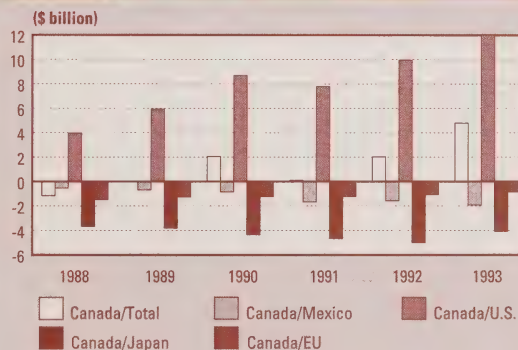
Mexico has emerged as a key centre of attention, particularly in light of improved access to the market resulting from the NAFTA. The Mexican market is expected to increase its capacity by over 50 percent to about two million units per year, with parts sales expected to grow to \$20 billion. The integration of the North American market after the phasing out of the highly protectionist Mexican Auto Decree will provide significant trade, sourcing and investment opportunities for both assemblers and parts companies. Many companies are now examining the potential and developing strategies to meet the competition.

The Pacific Rim, and China in particular, is seen as having the greatest potential for growth and is attracting new attention. A threefold increase in total annual production (three million vehicles) is forecast. The Big Three have established plans to set up plants in China, and expect many of their current parts suppliers to co-operate. China, on the other hand, expects suppliers to consider a partner located in that country, with pressure to investigate transferring supply capabilities to China. Analysis is required on the full scope of automotive market opportunities in China and the Pacific Rim.

In South America, Brazil and Argentina have substantial automotive industries, with major vehicle and parts investments from Europe, Japan and the United States. Brazil, the larger of the two, was the tenth-largest vehicle producer in the world in 1993, outranking Mexico. South America's automotive industries are protected under complex policies designed to increase local content and promote exports. The importance of these industries and the potential for freer trade with this area suggests that Canada should undertake a preliminary policy and market assessment.

**Figure 2 — Canadian Light Vehicle Market Shares**

Source: MVMA, Ward's, AIAMC, Japanese share excludes captives

**Figure 3 — Canada's Automotive Trade Balance with Major Trading Partners**

Source: Statistics Canada, Industry Canada. Does not include auto-related materials

## Canadian Position

The Canadian automotive industry is well positioned to pursue opportunities both in North America and elsewhere. It is Canada's largest manufacturing sector (7 percent of gross domestic product [GDP] for Goods Producing Industries), employing 137 000 in manufacturing and 339 000 in retailing and services. The total value of 1993 automotive shipments was \$56.7 billion (parts: \$16.3 billion; vehicles: \$38.9 billion; tires/tubes:

\$1.5 billion), up over 22 percent from 1992. With 15 assembly plants, Canada was the fifth-largest automotive producer in the world in 1993.

In 1993, Canada produced 2.2 million vehicles, up 14 percent over 1992, which represented almost 17 percent of total North American production. Over 80 percent of this was exported to the United States. Light vehicle sales in 1993 totalled 1.19 million units, down over 2 percent from 1992. Asian market share overall was approximately 21 percent (see Figure 2). Parts production in Canada represented about 12 percent of total North American automotive parts manufacturing. Over 90 percent of these sales were to the Big Three assemblers, with the remainder shared by Asian and European assemblers. Canada had an overall automotive trade surplus in 1993 of \$5 billion, up from \$2 billion in 1992 (see Figure 3).

The Canadian vehicle assembly base is 100 percent foreign-owned and is competitive. The Big Three have almost 85 percent of the assembly capacity, with new entrants having the balance. The Big Three and Asian assemblers have invested in state-of-the-art facilities in Canada, and have strong product mandates. All plants are either new, or have been modernized. Canadian assembly plants are known for their high quality. In 1993 quality ratings, three of the top four plants in North America were located in Canada. New entrants had approximately 8.5 percent of total assembly employment. Given that a number of Canada's trading partners are encouraging firms to increase local sourcing and investment, it is incumbent on Canada to clearly state its case as a source of competitive supply and an attractive location for investment. Increased productivity and dedication to continuous improvement are key to the future growth of the industry.

Supporting vehicle assembly in Canada is a strong parts manufacturing base, especially at the tier-two and tier-three levels, as well as an extensive tool and die sector. Canada has limited capability at the tier-one level. The parts sector



has doubled in size over the past 10 years, largely due to continued investment (\$1 billion annually over six years), so that it has become world class in quality, cost and delivery. Parts manufacturing output in 1993 was \$213 000 per employee, up 13 percent from 1992, and up 39 percent from 1989. Some Canadian parts companies have leading-edge process and production technology.

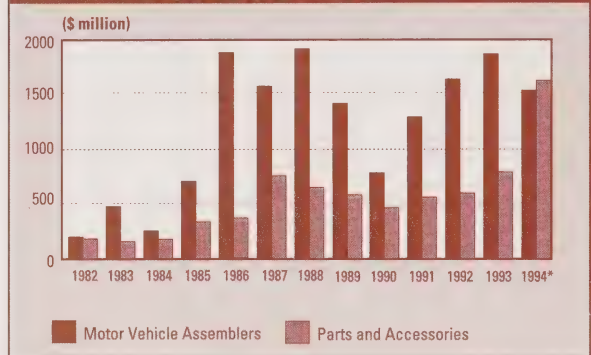
During the first wave of Japanese assembler investments to North America, Canada attracted three new plants involving close to \$1.5 billion in investment. Following the assemblers were Japanese parts investments, although most of these, particularly tier-one firms, established in the United States where the Japanese continue to invest heavily.

The Big Three have recently made significant capital investments in assembly and components in Canada. Investments by new entrant assemblers were important as well, albeit on a relatively smaller scale. In addition, capital expenditures by parts sector companies for expansion, tooling and new plants were at an historic high in 1993 (see Figure 4).

R&D tax credits in Canada are the most generous of Organization for Economic Co-operation and Development (OECD) countries, with the United States ranking fifth, and Germany eighth. However, this fact is not widely known. Canada's R&D tax policy should encourage additional investments in key technologies and strategic alliances.

The Canadian automotive industry has a good record of consistent improvement in quality and productivity and high education standards. It is globally competitive, with a firm commitment to training. Strong growth is expected in this industry, particularly with the current low inflation and interest rates. Automotive investors continue to have confidence in Canada. These factors should offer new opportunities for increased Canadian sourcing and exports to Japan and Europe, and investments in Canada.

**Figure 4 — Canadian Automotive Industry Capital Expenditures**



Source: Statistics Canada. \*Estimated

While Canada has been very successful in automotive trade with the U.S. (80 percent of output), it must seek to do the same with other countries.

## The Challenge

The Canadian vehicle and parts sectors are competitive. To take full advantage of new opportunities, Canadian manufacturers will have to move quickly as international competitors also seek to diversify by participating in growing markets. To develop markets further, customers around the world must receive a positive message from Canada that clearly conveys Canada's competitiveness. The profile of Canadian capabilities must be enhanced in the priority markets of the United States, Japan, Mexico and Europe, and in emerging markets of the Pacific Rim, notably China.

The challenge for governments is to create and maintain an industrial and trade policy environment that fosters the development of the motor vehicle and parts industry; maintains the momentum of attracting long-term manufacturing and technology investment; improves sourcing opportunities; and increases trade.



The challenge for industry is to continually improve competitiveness and to increase its ability to acquire new capabilities in products and processes.

## Strategic Direction

The overall action plan for the sector is focussed on the following strategic elements:

### Sourcing/Trade Development

- increase exports of vehicles, original equipment manufacturer (OEM) parts, aftermarket parts, service equipment, and specialty vehicles from Canada, through fairs, missions, visits, seminars and other activities (Department of Foreign Affairs and International Trade [DFAIT]/missions, Industry Canada [IC], provinces, Automotive Parts Manufacturers' Association [APMA], Automotive Industries Association [AIA], Pacific Automotive Co-operation [PAC]);
- ensure that the Canadian automotive sector receives full access to all sourcing/procurement, investment, trade, and design-in activities, by balancing international trade pressures through consultations (DFAIT/missions, IC);
- maximize sourcing opportunities in Canada and the United States by promoting original equipment (OE) and aftermarket (AM) manufacturers' products with potential clients (DFAIT/missions, IC, provinces, APMA, AIA, PAC);
- raise profile of the Canadian auto parts sector in Mexico, Japan, Europe and the Pacific Rim through promotion, by encouraging strong industry lead in international activities such as fairs, missions, seminars (DFAIT/missions, IC, provinces, APMA, AIA, PAC).

### Investment/Technology Acquisition

- encourage Canadian-based plants to continue to modernize, maintain key product mandates, and expand to world-scale as markets dictate; maintain a good business climate by ensuring policies and programs are responsive; and ensure that the advantages of doing business in Canada are well understood through design and use of promotional documentation (IC, companies);
- attract complementary high value-added parts manufacturing investments by promoting joint ventures, licensing and alliances between foreign and Canadian parts producers, and direct investments. This promotion would be targeted to subsectors where Canada lacks strength, through analysis and targeted promotion with industry (IC, DFAIT/missions, APMA, AIA, PAC).

### Research and Development

- encourage R&D in Canada through promotion of R&D tax benefits, and through bilateral technology development programs (IC, DFAIT/missions, APMA).

## Contact

Industry Canada  
Automotive, Urban Transit and Rail Branch  
235 Queen Street, 10th Floor East  
Ottawa K1A 0H5  
Tel.: (613) 954-3445  
Fax: (613) 952-8008

## Automotive

Activity	Date	Location	Dept.	Contact
<b>Asia-Pacific South</b>				
Auto Shanghai '95: Ontario Exhibit	Jun-95	Shanghai	Ontario	416-325-6782
<b>Canada</b>				
Foreign Buyers' Program from Western Europe, Latin America, Middle East	Ongoing	Canada	IC	613-954-3706
Marketing Opportunities Seminars	TBD	Canada	IC	613-954-3706
<b>East Asia</b>				
Auto Parts/Accessories Show: National Stand	Nov-95	Seoul	DFAIT	613-995-8744
<b>Japan</b>				
PAC Seminar Programs (OEM)	Ongoing	Toronto	PAC	416-222-0700
Pacific Auto Co-Operation: Visit to Canada	Apr-95	Canada	IC	613-954-3445
Japanese Buyers to AAMA Conference	Apr-95	Toronto	IC	613-954-3445
Surface Transport Equipment Mission from Japan	May-95	Quebec	Quebec	514-499-2190
Tokyo Motor Show: National Stand	Oct-95	Japan	IC	613-954-3445
OEM Auto Parts Mission: Tokyo Motor Show	Oct-95	Japan	IC	613-954-3445
PAC/APMA Automotive Conference	05-Oct-95	Toronto	IC	613-954-3445
<b>Latin America and the Caribbean</b>				
Expopartes	May-95	Bogota	DFAIT	613-996-5548
Automotive Partnering Workshop	May-95	Mexico	APMA	416-620-4220
PAACE '95 Mini-Mission	Jul-95	Mexico	IC	613-954-3436
PAACE '95 (OEM/Aftermarket): National Stand	Jul-95	Mexico City	IC	613-954-3436
ExpoMotors '95 (Aftermarket Parts): Info Booth	Oct-95	Buenos Aires	DFAIT	613-996-5549
<b>United States</b>				
SEMA/AI: National Stand	Nov-95	Los Angeles	DFAIT	613-944-5149
APMA Workshop	Jan-96	Detroit	DFAIT	613-944-5149
Society of Auto Engineers	Feb-96	Detroit	DFAIT	613-944-5149
Mid-America Trucking Show: National Stand	Mar-96	Cincinnati	DFAIT	613-944-5149

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
<b>Western Europe and European Union</b>				
Euro-Quebec Hydro-Hydrogen Pilot Project	Ongoing	Montréal	Quebec	514-499-2173
Canadian International Auto Show: Incoming Buyers	17-Feb-95	Toronto	DFAIT	613-992-7001
Euro Assemblers: Sourcing Mission	Apr-95	Ontario, Quebec	IC	613-954-3725
Auto Media Mission to Canada from Europe	Jun-95	Ontario, Quebec	IC	613-954-3725
Parts Mission from Canada	Sep-95	Germany, Austria, Sweden	IC	613-954-3725
Equipment Auto: Info Booth	13-Oct-95	Paris	DFAIT	613-992-7001
Automechanika (OEM) Buyers' Follow-up Mission	Nov-95	Toronto	Ontario	416-325-6654
Ontario Investment Seminar (Germany)	Feb-96	Frankfurt	Ontario	416-325-6654
Ontario Investment Seminar (U.K.)	Feb-96	London	Ontario	416-325-6654
Automechanika '96: National Stand	Sep-96	Frankfurt	IC	613-954-3725



## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

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Overview

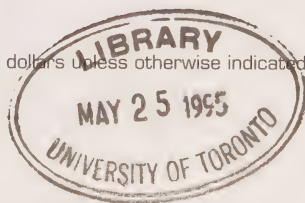
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ISBN 0-662-22839-1

*Aussi disponible en français sous le titre Biotechnologies.*



## Biotechnologies

**B**iotechnologies involve the use of either naturally occurring or engineered biological systems in the production of goods and services. Commercial applications of biotechnology occur in a wide range of sectors, but primarily in the health-care, agri-food and, to a lesser extent, environmental sectors. Thus far, biotechnology has had the greatest impact in the health-care sector, and is in the early stages in the agri-food and environmental sectors. Bio-industries in all three sectors are distinguished from their non-biotechnology counterparts by their relatively high level of research and commitment to innovation, and are therefore discussed together in this section of the International Trade Business Plan.

### International Environment

Worldwide, it is estimated that between 3000 and 4000 companies, employing about 250 000 people, represent the more broadly defined bio-industries, which use biotechnology in some aspect of their products and services. The number of companies whose core business involves biotechnology is smaller, at approximately 2000 to 2500, employing approximately 150 000 people.

Biotechnology is still in the early stages of development, somewhat like the software or telecommunications industries were 15 to 20 years ago. Nevertheless, its influence and socio-economic impact are expected to be at least as pervasive. The impact in health care is already evident, as biopharmaceuticals are currently on the market, and over 50 percent of new drugs in North American clinical trials are products of biotechnology. In agriculture, it is predicted that by the year 2005, 50 percent of the crops grown in developed countries will be transgenic. As for the environment, the market in the United States and Western Europe for bioremediation of toxic waste sites is expected to increase fivefold, from \$200 million in 1993 to \$1 billion in 2000.

Around the world, most biotechnology companies are heavily committed to research and development (R&D) programs, and only relatively few have sufficient products on the market to be considered profitable. An estimated \$15-billion worth of biotechnology products was sold worldwide in 1993. Depending on how well

biotechnology regulations are implemented and harmonized internationally, and how well public opinion accepts products of biotechnology, it is estimated that total sales will grow rapidly over the next few years to reach \$75 billion to \$150 billion by the year 2000.

The major international competitors for Canadian bio-industries are found in the United States, Japan and Europe. The U.S. has by far the most developed and diversified bio-industry, with 1270 core biotechnology firms employing 97 000. Statistics for Japan are difficult to compare with those for other countries, since biotechnology in that country is mostly carried out within large corporations where it is not usually the prime focus. Nevertheless, even though the industrial paradigm is different, Japan is second only to the U.S. in the development of its bio-industries, and is positioning itself for the future through continued commitment to technological R&D, or through domestic and international acquisitions. The European bio-industry began to develop later than its U.S. and Canadian counterparts, and now has an estimated 370 core biotechnology firms employing about 15 000.

Bio-industries are also developing in other regions of the world. Australia has an emerging bio-industry (approximately 30 core firms employing an estimated 600 people). Southeast Asia has a number of major corporations in the resource and agri-food sectors that are beginning to focus on biotechnology as a tool for producing value-added products. A number of core

biotechnology firms are also developing in the region, especially in Singapore. Latin America has similar developments, with large agri-food companies such as breweries diversifying into value-added products through biotechnology, but also with a few core firms such as BioSidus, a biopharmaceutical manufacturer in Argentina.

## Canadian Position

The Canadian biotechnology effort is small when compared to that of the U.S. and Japan, but compares favourably with that of other countries. Approximately 300 companies employing 13 000 form the broadly defined bio-industry in Canada. Some 120 firms employing 6500 have biotechnology as their core business. In 1993, the core biotechnology firms invested approximately \$250 million in R&D.

The overall bio-industry in Canada is growing rapidly. A recent survey of the more broadly defined bio-industry indicated that from 1989 to 1993, sales grew at an average annual rate of 24 percent, exports at 19 percent and employment at 14 percent. In 1993, estimated total sales were almost \$2 billion, and exports were approximately \$750 million.

## Regulation

On the domestic front, the regulatory environment is a major issue affecting international competitiveness. Countries that have set up more stringent or less responsive regulatory regimes for biotechnology products have experienced a loss of investment, as well as the movement of R&D and manufacturing activities to countries with more favourable regulatory systems. Canada is currently developing its biotechnology regulations, and a top priority for the federal government is the early finalization and promulgation of these regulations, ensuring that its regulatory practices are harmonized with those of its major trading partners, especially the United States. The objective is to develop a system that effectively

manages risk, while ensuring that regulatory requirements for bringing biotechnology products to market in Canada are not more onerous or time consuming than those of our major trading partners.

## Investment

The Canadian bio-industry, like its counterparts in the U.S. and Europe, is experiencing increasing difficulty in raising capital, at a time when its capital requirements are rapidly expanding. While alliances with multinational pharmaceutical companies may address the needs of health-related bio-industries to a large extent, other sources are needed to address capital requirements in the agri-food and environmental bio-industries.

On the domestic front, efforts continue to encourage the private sector to place more resources in venture capital for promoting the start up and development of early-stage bio-industries. In some cases, tax incentives (such as those for labour-sponsored venture capital funds) are being used to help achieve this objective. In other cases, key private-sector institutions are taking the initiative. One such venture is Neuroscience Partners LP, which was formed by the Royal Bank, the Caisse de dépôt et placement du Québec, MDS Health Ventures, Manufacturers Life Insurance Company and several pension funds.

On the international front, an information package highlighting the Canadian investment climate for biotechnology, including Canadian tax incentives, government programs and research capabilities, is being developed by the Department of Foreign Affairs and International Trade (DFAIT) for use by Canadian missions abroad to promote Canada as a place to invest in biotechnology. Another initiative by DFAIT focusses on using contacts with international investors to raise capital for early stage firms in the agri-food and environmental biotechnology sectors. They have traditionally received less attention from investors than the health-care biotechnology sector.



## Human Resources

Canada appears to have an adequate supply of highly skilled researchers in the science and engineering disciplines related to biotechnology, although skill shortages are evident in the scale-up and production process and in business management.

A comprehensive survey of future human resource needs by the Canadian bio-industry will be carried out by Human Resources Development Canada, and the results will be made available to educational institutions so that curriculums may be revised as necessary. To upgrade Canadian biotechnology firms' international business skills, Industry Canada (IC) will include issues relating to biotechnology companies in sectoral training programs being developed by the Forum for International Trade Training (FITT). The feasibility of including biotechnology in a pilot course directed at the agri-food industry is being investigated by FITT.

## Intellectual Property Protection

Changes to the Canadian Patent Act to increase the length of patent coverage for pharmaceuticals have already enhanced Canada's attractiveness as a place to develop and manufacture biopharmaceuticals. Other changes, to be phased in over the next year, deal with the handling of sequencing data and the deposit of biological material. Beginning in 1996, the Canadian Patent Office will have the capacity to process sequencing data in electronic form for nucleotides and peptides. This will lead to more efficient processing of patent applications, and will provide a more accessible database for the public. In the short term, Canada will become a signatory of the Budapest Treaty, so that by 1996, the deposit of biological material in any of the collections of the international depository authorities may be considered as part of a patent disclosure in Canada.

## Health Biotechnology

Canada has a world-class bioclinical research base in its medical schools and teaching hospitals. As a result, companies focussed on biotechnology as it applies to human health form the largest single group in the Canadian bio-industry, accounting for nearly 48 percent of all companies and 71 percent of the core industry. This group includes developers and manufacturers of diagnostics and therapeutics, as well as suppliers of biologicals (antibodies, antigens, fine biochemicals). It has also received more direct investment by the private sector (an estimated \$150 million in 1993) than any other bio-industry group. Over the period 1989-93, the annual average growth rates of sales, exports and employment were well above the industry average, at 27 percent, over 50 percent and 17 percent respectively. In 1993, Canadian health biotechnology sales were approximately \$1 billion, exports were approximately \$300 million and employment approximately 8000.

Companies in the diagnostics segment of this sector are challenged by the fast pace of technological change in this field, as well as by the cost-containment demands on health-care systems worldwide. These companies need to identify technology to advance their product lines, investment capital to support their R&D, and marketing partners.

Companies in the therapeutic segment of this sector, especially biopharmaceutical firms, are heavily committed to R&D, product development and increasingly, clinical trials. The bulk of the products, some of which represent billion-dollar-a-year markets, have yet to reach the marketplace. The impact of health-care cost-containment pressures has been to reduce the flow of investment from public equity markets. As a result, biotherapeutics companies need to identify alternative international sources of investment capital to bring their products to market. They also need to identify alliance partners who can help them with regulatory approvals and penetration of foreign markets.

## Agri-food Biotechnology

Canada has developed a strong competitive position in animal husbandry (embryo transplants, high-quality bovine semen), animal protection (veterinary and aquaculture vaccines), plant breeding, biological fertilizers, biological pest control and aquaculture. Almost 20 percent of the core Canadian bio-industry is in the agri-food sector, forming the second-largest industry grouping. Over the period 1989-93, the annual average rates of growth for sales, exports and employment were 17 percent, 7 percent and 4 percent respectively. In 1993, agri-food biotechnology sales were almost \$600 million, exports approximately \$400 million and employment about 4000. The lower growth rates for this sector, as compared to health biotechnology, reflect two related factors:

- private-sector investors have tended to neglect this sector in favour of the perceived higher-profit potential in other sectors such as health care; and
- development of a responsive regulatory regime in Canada for agri-food biotechnology products has experienced significant delays when compared with the United States.

Aquaculture is an increasingly important segment of the agri-food bio-industry worldwide. The global annual catch of fish from the wild has increased to 100 million tonnes, a level that is not likely sustainable. Currently, worldwide production from aquaculture is about 20 percent of the wild catch, but by the year 2010, it is estimated that the aquaculture catch will exceed that from the wild. Although Asia remains the largest aquaculture producer with over 80 percent of the world output, Canada's aquaculture output has increased substantially from sales of \$7 million in 1984 to almost \$300 million in 1993. Salmon farming forms the largest segment of the Canadian industry, with sales of about \$200 million in 1993. Since 1992, Canada has sold more farmed salmon than wild salmon. Farming of trout, arctic char, mussels, scallops and other species is also in various stages of development. Aquaculture feeds

form a \$150-million business for a number of Canadian companies. A fish health and husbandry industry has developed on both coasts, and is actively pursuing market opportunities with fish and shellfish farming operations in Latin America and the Asia-Pacific region. Biotechnology is playing an increasingly important role both in brood stock development and in identifying and preventing diseases that can drastically affect commercial production.

Agri-food biotechnology companies need help to identify niche market opportunities and potential joint-venture partnerships to successfully penetrate export markets. This is especially true in the emerging market countries of the Asia-Pacific region and Latin America, which have focussed on biotechnology as a means of increasing agricultural productivity while potentially decreasing the use of chemical fertilizers and pesticides.

## Environmental Biotechnology

Biological systems to deal with environmental problems in air, water and soil are currently being developed. Traditional methods that consider the biological component as a "black box" still predominate. However, research is intensifying worldwide on selecting naturally occurring organisms that break down specific toxic substances; improving the understanding of the conditions that make these organisms work more effectively; and, more recently, developing genetically modified organisms specifically designed to break down certain persistent toxic chemicals.

Less than 10 percent of the Canadian bio-industry is in the environmental sector. About 20 to 30 Canadian firms have developed the biological/microbiological expertise to form the core of an emerging environmental bio-industry. A much larger number of consulting engineering firms are active in site remediation, wastewater treatment, etc., but have little or no in-house biological expertise. In 1993, Canadian sales of environmental biotechnology products and services were estimated to be about \$25 million

to \$50 million, exports about \$10 million to \$20 million and employment about 500 to 1000.

Canada needs to promote the upgrading of technical capabilities in its bio-environmental companies through stronger linkages with researchers in this field. Efforts will continue to build more company participation in existing research networks in the bio-environmental field. These augmented networks will promote the flow of information not only on new technology developments but also on markets and new international business opportunities in this field. This will encourage the development of Canadian strategic alliances for export market penetration. Formation of strategic alliances is especially important, since most of the Canadian environmental firms with biological/microbiological expertise are small and focussed on niche markets, and will only be able to compete in international markets by forming partnerships to provide the full-service capabilities offered by their multinational competitors. Several consulting engineering consortia have recently been formed in Canada to address this issue, and have begun to focus on penetrating export markets in North America and the Asia-Pacific region. Since these consortia currently have relatively little in-house biotechnology expertise, attempts are being made to promote links with internationally active biotechnology firms.

## Strategic Direction

### Upgrading Canadian Trade Promotion Capabilities

Biotechnology products often differ from their non-biotechnology counterparts. For example, biological fertilizers are specific to certain types of plants and soils, and function in quite a different manner than their chemical counterparts. Trade promotion initiatives need to take this into consideration.

Trade commissioners and commercial officers in Canadian missions abroad will receive information and orientation to better promote the

rapidly expanding stream of Canadian biotechnology products and services. It is important to do this now, since a significant number of Canadian biotechnology products are already on the market, and a much larger number will soon enter the marketplace. Industry Canada will collaborate with the private sector to put information on the Canadian industry and its capabilities into an easily accessible electronic format, using IC's INSIGHT information system. IC will work with DFAIT to make this information system available to trade promotion personnel. Also, IC will develop orientation sessions in collaboration with the National Research Council (NRC), to profile specific segments of the Canadian bio-industry to groups of trade commissioners during their periodic visits to Canada. As electronic information capabilities develop, better tools will be available to promote Canadian products and services abroad. The first prototype multimedia marketing systems based on CD-ROM technology have already been demonstrated (profiling companies in the Canadian telecommunications sector), and application of this medium to promote Canadian biotechnology firms will be explored over the next few years.

### Intelligence on Business Climate and Market Opportunities

Access to timely market intelligence is a key factor for success in international business. As trade commissioners and commercial officers in Canadian missions abroad increase their awareness of Canada's bio-industries, it will be possible to improve the quality of the business and market intelligence that they gather on behalf of the small- and medium-sized firms that form the bulk of this industry grouping. These firms need information from abroad on the business climate (e.g. biotechnology regulations, intellectual property protection for biotechnology inventions), business opportunities, and key business and government contacts. In some cases this intelligence is already available in the form of published documents, but special studies may be required in other cases, especially for emerging markets.

## Business Networks for Intelligence Gathering and Dissemination

Industry Canada will collaborate with the Canadian Institute of Biotechnology, other Canadian biotechnology associations and private-sector brokers to promote the development of business networks in Canada that will help specify the intelligence needs of firms in different segments of the Canadian bio-industry. Some existing biotechnology networks, such as Aquatech or Biominet, or some of the biotechnology-oriented networks of Centres of Excellence could form the nucleus for such networks. These business networks would receive incoming information from missions abroad, and act as steering groups for specific market intelligence studies and initiatives. Advances in telecommunications technology will be used to overcome barriers to information flow and to promote better two-way communication of Canadian bio-industry capabilities and international market needs. Electronic mail groups and bulletin boards will be used to support this networking activity and to provide intelligence to Canadian firms and an easily accessible archive of information gathered to date.

## International Activities

Conferences, trade shows and missions provide opportunities for Canadian firms to develop new business and to gather intelligence first-hand. Although a large number of biotechnology-related events are held each year, both government and industry must focus their promotional efforts on only a few events in each bio-industry segment, in order to have impact with limited resources. The same business networks that help specify intelligence-gathering priorities will also advise on event priorities. IC and DFAIT will co-operate on a feasibility study on the use of a bulletin board system to provide information in electronic format on a wide range of international biotechnology-related events, some of which will be highlighted as priority events for Canada.

## International Events and Intelligence Gathering

### *Health Biotechnology*

Priority will continue to be placed on investment and partnering initiatives managed by DFAIT. Conferences and trade shows will have a lower priority. The investment and partnering meetings will allow small groups of Canadian firms to interact one-on-one with leading pharmaceutical and investment groups in the U.S. and selected European countries. Some of these events, especially those for Western Europe, will be carried out in collaboration with the Canadian Institute of Biotechnology. Time and location of these meetings will continue to be arranged according to Canadian industry demand.

The one conference being promoted this year is BIO '95, to be held in San Francisco. DFAIT is examining the feasibility of organizing one-on-one sessions at this conference to provide opportunities for Canadian biotechnology firms to meet with potential investors and alliance partners.

IC and DFAIT will work with the Canadian Institute of Biotechnology and the Industrial Biotechnology Association of Canada to form a core group of health biotechnology firms to advise on intelligence-gathering priorities. Until this group is established, intelligence gathering for this sector in developed countries will focus on identifying and facilitating meetings with potential alliance partners and investors, primarily in the U.S. and Europe.

### *Agri-food Biotechnology*

A number of agri-food biotechnology firms from Saskatchewan, organized by AgWest Biotech, have recently visited countries in the Association of Southeast Asian Nations (ASEAN) region to investigate potential business opportunities. Also, representatives of the Canadian Institute of Biotechnology and several Canadian agri-food biotechnology companies, with assistance from DFAIT, will attend the Fourth Pacific Rim



Biotechnology Conference in Australia in February 1995. Efforts will be made by DFAIT and IC to build on the intelligence gathered during these activities, to continue to promote Canadian capabilities in the Asia-Pacific region, and to encourage visits to Canada by interested companies. This work will be undertaken in partnership with organizations such as AgWest Biotech and the Canadian Institute of Biotechnology, as well as national and regional biotechnology associations.

Research links are well established between Canada and Latin America in agri-food biotechnology. A small but energetic group of Latin American companies in this sector visited some of their Canadian counterparts in 1994 during the Association of Biotechnology Companies Meeting in Toronto (BIO '94). As a follow-up, the potential for a partnering meeting in Mexico during 1995-96 is under consideration, and two market studies (for animal-health products and biological pest-control agents) are being planned to support this initiative.

#### *Environmental Biotechnology*

Several Latin American environmental engineering firms visited Canada during BIO '94. There is increasing interest among Canadian bio-environmental companies to find capable local partners in Latin America. A study of the Mexican market for bioremediation, supported by IC, is in the early stages of development, and a core group of bio-environmental companies and researchers has agreed to help steer the project. This study will help identify potential Mexican partners for Canadian firms in the bio-environmental field. The intention is to hold a partnering meeting in Mexico after the results of the study have been disseminated in Canada.

## **Contact**

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Ottawa K1A 0H5  
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Fax: (613) 952-4209



## Biotechnologies

Activity	Date	Location	Dept.	Contact
<b>Asia-Pacific South</b>				
Business Financing for Emerging Biotech Firms: Promo	TBD	Various	DFAIT	613-992-5339
Incoming Mission from Australia	30-Jun-95	Montréal	IC	514-283-8813
<b>Canada</b>				
Market Profile (Mexico)	TBD	Canada	DFAIT	613-996-8625
Pharmaceutical Strategic Alliance Mission from Texas	Oct-95	Montréal, Québec City	DFAIT	613-944-9482
<b>East Asia</b>				
Outgoing Mission to Promote Canadian R&D	Sep-95	Seoul	DFAIT	613-996-2807
<b>United States</b>				
Strategic Alliance Facilitation Program	TBD	Canada/Various	DFAIT	613-944-9482
Venture Capital Roundtable on Biotech	TBD	Philadelphia	DFAIT	613-944-9482
Biomedical Study: Update	TBD	Chicago	DFAIT	613-944-9482
Breakfast Seminars: Strategic Alliances	TBD	U.S./Various	DFAIT	613-944-9482
Baylor College of Medicine (Houston) Technology Transfer	05-May-95	Montréal, Vancouver	DFAIT	613-944-9482
BIO '95: Info Booth	20-May-95	San Francisco	DFAIT	613-944-9482
Midwest Regional Strategic Alliances Mission	Jun-95	Evanston	DFAIT	613-944-9482
Midwest Biotech: Industry Guide	Jun-95	Chicago	DFAIT	613-944-9482
Mission to Michigan Biotech Association	Jun-95	Ann Arbor	DFAIT	613-944-9482
Pharmaceutical Purchasing Organizations Strategies	Aug-95	Dallas, Houston	DFAIT	613-944-9482
Biomedical Mission from Atlanta	Sep-95	Toronto, Montréal	DFAIT	613-944-9482
Environmental Biotech Partnering Event	Sep-95	Boston	DFAIT	613-944-9482
Biotech Technology Transfer: Guide	Sep-95	Minneapolis	DFAIT	613-944-9482
Incoming Strategic Alliance Mission	Oct-95	Quebec	DFAIT	613-944-9482
Connect San Diego: Presentation	Oct-95	San Diego	DFAIT	613-944-9482
St. Louis Biotech Forum: Investment Roundtable	Oct-95	St. Louis	DFAIT	613-944-9482
Cross-Canada Biotech Industry Seminars: Strategic Alliances	Nov-95	Canada/Various	DFAIT	613-944-9482
NEBS Mission from Eastern Canada	Nov-95	Boston, Baltimore	DFAIT	613-944-9482
Bio-pharm Investment Mission from Minneapolis	Jan-96	Ontario, B.C.	DFAIT	613-944-9482
Biotech Forum: Strategic Alliances	Feb-96	Milwaukee	DFAIT	613-944-9482

Note: Dates and locations are subject to change.

## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- |  |   |
|--|---|
| <p>Overview</p> <ol style="list-style-type: none"> <li>1. Advanced Manufacturing Technologies</li> <li>2. Agriculture and Food Products</li> <li>3. Aircraft and Parts</li> <li>4. Automotive</li> <li>5. Biotechnologies</li> <li>6. Business, Professional and Educational Services</li> <li>7. Chemicals, Plastics and Advanced Materials</li> <li>8. Construction Products</li> <li>9. Consumer Products               <ul style="list-style-type: none"> <li>■ Apparel and Fur</li> <li>■ Textiles</li> <li>■ Footwear</li> <li>■ Sporting Goods (including recreational watercraft)</li> <li>■ Tools, Hardware and Housewares</li> <li>■ Residential Furniture</li> <li>■ Business and Institutional Furniture</li> </ul> </li> <li>10. Cultural Industries</li> <li>11. Defence Products</li> <li>12. Environmental Equipment and Services</li> <li>13. Fish and Sea Products</li> <li>14. Forest Industries</li> </ol> | <ol style="list-style-type: none"> <li>15. Information Technologies and Telecommunications               <ul style="list-style-type: none"> <li>■ Sector Overview</li> <li>■ Computers and Peripheral Equipment</li> <li>■ Electronic Components</li> <li>■ Geomatics</li> <li>■ Instrumentation</li> <li>■ Software Products and Computer Services</li> <li>■ Telecommunications</li> </ul> </li> <li>16. Medical and Health-Care Products and Services               <ul style="list-style-type: none"> <li>■ Medical Devices</li> <li>■ Pharmaceuticals</li> <li>■ Health-Care Services</li> </ul> </li> <li>17. Minerals and Metals</li> <li>18. Oil and Gas Products and Energy Equipment</li> <li>19. Power Equipment</li> <li>20. Primary/Secondary Industrial Machinery               <ul style="list-style-type: none"> <li>■ Mining, Forestry, Pulp and Paper</li> <li>■ Agricultural Technology, Machinery and Equipment</li> <li>■ Ocean and Marine Shipboard Technology</li> </ul> </li> <li>21. Rail and Bus Equipment</li> <li>22. Space</li> <li>23. Tourism</li> </ol> |
|--|---|

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Services commerciaux, professionnels et éducationnels.*





## Business, Professional and Educational Services

**B**usiness, professional and educational services encompass a wide range of sectors, including: accounting; consulting engineering; management consulting; scientific services; architecture; financial services; communications services; construction; geomatic services; legal services; design; computer services; personnel services; security services; training; transportation and logistics; distribution (retail and wholesale) services; and health-care services. Typically, these services are sold to businesses rather than to final consumers.

Services now represent about three quarters of Canada's gross domestic product (GDP), and account for some 90 percent of new job creation. Business, professional and educational services have shown the most growth and now account for almost half of total services output.

### International Environment

Business, professional and educational services represent an estimated 20 percent of world trade. In recent years, these services have become the fastest-growing component of international trade, with an average annual growth rate of 8 percent.

A number of factors have contributed to this growth:

- Trade liberalization: the North American Free Trade Agreement (NAFTA), the European Union's single market and the General Agreement on Trade in Services (GATS) all contain provisions designed to open markets and increase trade in services.
- Deregulation is taking place in some industries, including financial services, transportation and telecommunications.
- Business practices are increasingly globalized through extensive use of information technologies, the internationalization of financial markets, and the trend toward cross-border partnerships and strategic alliances.
- The distinction between products and services is increasingly blurred. In many situations, provision of related services is a vital element of the successful export of goods.

- Corporation and government rationalization, and the trend to outsourcing, have provided services firms with new markets.

Major exporters are the United States (the overall leader in services exports), Europe and Japan. However, countries such as Korea, Brazil, India and Mexico are emerging as serious contenders. The major importers of services are the United States, Pacific Rim countries, South Asia, Africa and the Middle East.

### Canadian Position

Canada's receipts from these services have increased markedly since 1980, and as a result, business and professional services now constitute the largest component of Canada's non-merchandise trade, accounting for some 38 percent of services exports and ranking second in Canada's export earnings, behind motor vehicles. Nevertheless, Canada's services export performance lags behind other countries in terms of share of GDP.

Considering the dominant importance of services to Canada's overall economy, Canadian services companies have the potential to do much better in international markets. Indeed, many services firms have already begun to demonstrate this potential, recognizing the need to compete globally for both survival and growth. Over the last decade, Canada's exports of business services increased at an average annual rate of 10.2 percent (see Figure 1). Most exports are to the United States, but an increasing number of Canadian firms are succeeding in other foreign markets, such as Western Europe and the Asia-Pacific region.

The Canada-U.S. Free Trade Agreement (FTA) and the NAFTA will assist Canadian firms as they increase their efforts to penetrate U.S. and Latin American markets. Canadian services firms might also target the Asia-Pacific region and others, where the financing of projects by multilateral development banks (MDBs) figures prominently. The Middle East also offers attractive opportunities for services exports.

Many potential exporters are not aware of the challenges and opportunities of international trade in business, professional and educational services. Fewer still know how to access these foreign markets, and many lack market information and requisite marketing skills. Although Canada boasts a few large multinational firms, Canadian services suppliers are typically small- and medium-sized enterprises (SMEs) and sole practitioners.

Canada has particular strengths in business services; many of these strengths have already been demonstrated by export successes (see Appendix A).

## Strategic Direction

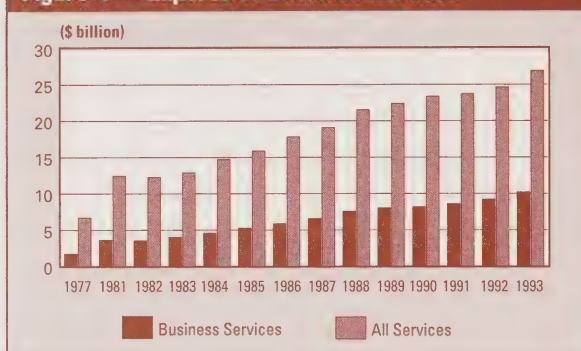
### Challenges

Canada's continued prosperity depends on expanding export sales. To meet this challenge Canada needs to further develop the export capability of its diverse SMEs. Domestically, this involves identifying small- and medium-sized services firms that are capable of exporting, and improving the skills and export-readiness of those not yet ready to venture into foreign markets.

When Canadian services exporters are ready to enter new markets, they face unique challenges. In most markets, it is critical for them to:

- develop the partnering skills required for local alliances, which are often the key to success;
- develop strong marketing skills, particularly those involved in developing the principal-client relationship, where an agent or marketing representative is ineffective;

**Figure 1 — Exports of Business Services**



Source: Statistics Canada

- acquire an in-depth knowledge of local conditions, such as business practices and cultural considerations;
- develop strong personal contacts and networks critical to the services exporter for whom relationship is everything;
- continually generate ways of establishing credibility in new markets, where product exhibition (as in the case of goods) is normally not possible;
- continually innovate to keep up with the increasingly sophisticated requests of clients.

### Objectives

A strategy to improve Canada's services export performance must take into account the following objectives:

- develop the international business readiness of Canadian services firms, especially SMEs;
- promote partnering and strategic alliances among Canadian and foreign services firms;
- raise the profile and credibility of Canadian firms in foreign markets;
- provide better response to the unique needs of the services exporter through trade officer training;

- ensure the timely delivery of market information to services firms;
- better exploit MDB and other major project opportunities.

### Strategies

The following measures will be implemented to increase the export performance of Canadian services firms:

#### *International Business Readiness*

- Disseminate information to SMEs on sourcing databases, such as the Business Opportunities Sourcing System (BOSS) and World Information Network (WIN) Exports, and on other programs such as the Program for Export Market Development (PEMD). This activity will figure prominently in all government programs, and will assist the efforts of SMEs.
- Provide export skills training to services exporters. The services sector is dominated by SMEs that have specialized skills, but that often have limited marketing expertise. Government programs will include workshops on effective marketing, differentiating services, effective partnering and financing options. Multimedia exporter guides for services firms will be produced by the Department of Foreign Affairs and International Trade (DFAIT) and Industry Canada (IC), with information specific to priority markets.
- DFAIT and IC will work with the Forum for International Trade Training (FITT) to develop a services industries module for its training program.

#### *Partnering*

- Improve technology/marketing relationships among Canadian goods and services providers. DFAIT and IC will work with industry associations to achieve such partnerships and alliances, and will structure events in Canada so that these networks can be encouraged.

- Increase partnering between Canadian and foreign firms to offer competitive bids integrating each party's skills. Export promotion activities by DFAIT and IC will facilitate and encourage this trend by promoting networking opportunities and identifying potential partners.
- Canada Mortgage and Housing Corporation (CMHC), IC, DFAIT and other federal agencies are developing export strategies for Canada's housing industry. These will increase industry awareness, ascertain industry priorities and develop approaches for taking advantage of opportunities in foreign markets. The housing industry export strategy, which should be available early in 1995, will be of interest to firms in both the services and merchandise industries. Information can be obtained from CMHC or IC.
- IC will work with industry groups to develop a "Team Canada" approach to international trade in services — this year with the Working Group in Health Care Services.

#### *Profile and Credibility*

- Design and deliver new trade-development initiatives for services exporters, to profile Canadian expertise and build credibility in foreign markets. DFAIT will arrange events in co-operation with local media, organize Canadian participation in conferences, and set up marketing and technical presentations.

#### *Trade Officer Training*

- Train DFAIT trade commissioners to expand their knowledge of Canadian services companies, to help them provide expert assistance to services exporters.

#### *Market Information*

- Identify foreign business opportunities by preparing selected market-intelligence studies in close co-operation with industry. DFAIT will seek the engagement of services industry associations to:

- determine export interests and market priorities of members;
  - define market-intelligence needs;
  - help members with their export efforts and respond with the training they require;
  - develop sectoral strategies with IC.
- IC and DFAIT will soon offer innovative methods of delivering information to clients through electronic bulletin board services (BBS) and the “information highway.” These will provide industry with more timely and higher-quality strategic information, and will enable suppliers to network in order to share information and identify partners. Two examples are a BBS for commercial education and training, and an update of the Canadian Health Care Services Suppliers Database in a user-friendly software format.
  - Develop industry statistics, led by Statistics Canada and in co-operation with IC and industry associations, to gain a fuller understanding of Canada’s services industries in an international context.

#### *International Projects*

- Build international financing support for Canadian services companies to compete abroad. DFAIT’s activities will include building support through domestic agencies such as the Export Development Corporation (EDC), the Canadian International Development Agency (CIDA), the Canadian Commercial Corporation (CCC) and the International Development Research Centre (IDRC).
- A federal interdepartmental task force has examined the issue of how to maximize Canada’s commercial opportunities related to MDB lending. DFAIT and IC will improve mechanisms for supplier identification and development, and for the timely dissemination of project information and intelligence to potential bidders. They will also offer seminars on business practices in MBDs (procurement, proposal writing and professional development).

## Appendix A

### Overview of Services Sectors with Export Potential

**Construction:** This sector has traditionally confined its activities to the domestic market, which has been dominated by large civil engineering and energy-related projects. Many contractors have started bidding for foreign construction projects in search of new market opportunities.

Canadian firms have gained international prominence and success in specialized projects such as airports, ports, rapid transit systems, energy-related construction and construction management. The potential in foreign markets is large, as the demand for infrastructure facilities around the world continues to grow. Canadian contractors will have to form alliances to effectively compete for turnkey projects. They will also have to increase their financial strength to undertake BOOT (build, own, operate and transfer) and other highly specialized projects, as many foreign customers are demanding that contractors share in the financial costs and risks associated with projects.

**Architectural Services:** Many architectural firms have been actively bidding on projects abroad. Canadian firms have been particularly active in China, Southeast Asia, the Middle East and Eastern Europe. One area of success has been in designing commercial complexes and shopping centres in countries with a history of centrally-planned economies. Canadian designers are able to offer modern designs suitable for a free-market economy, and provide management that ensures timely completion of projects.

**Consulting Engineering:** These specialized services will continue to be in demand around the world. Canadian firms will have to form alliances to compete for integrated projects in developed and developing countries.



**Health-care Services:** The largest market, with the greatest potential for Canadian health-care services firms, is the United States. Growing incomes, combined with prominent health-care needs, means that the Asia-Pacific region, Latin America and the Caribbean, along with Saudi Arabia and a number of countries in Eastern Europe, also constitute markets with promising returns.

Priorities for developed countries centre on cost containment; efficient managerial practices; resource optimization; insurance plans; computer information systems; billing and hospital administration; long-term care facilities; and home-care operations. Developing countries face numerous challenges in the provision and expansion of primary and preventive health care.

In many developing countries, MDB expenditures play an important role. The World Bank committed to approve an annual minimum value of US\$800 million for projects relating to health care, population and social development. Canadian companies are well placed to respond to these opportunities, as the Canadian health-care system has a reputation abroad for providing quality care, based on a successful partnership between the public and private sectors.

**Management Consulting Services:** Opportunities exist in many geographical regions, including Eastern Europe, South America and the Pacific Rim. Although many countries in these areas are served by large international consulting firms or have well-established domestic practices, niche opportunities do exist. Canadian functional and sectoral consulting expertise must be channelled to identify and pursue opportunities as they emerge in these areas.

**Geomatics Services:** Canadian firms have been successful in competing for the growing worldwide demand for geographic and spatially related information. Internationally, Canadian businesses have been aided by their strong reputation for technology and technical expertise, in part earned through development assistance projects for CIDA.

Geomatics is experiencing a technological revolution that is changing the products and services that can be delivered to clients. These technological changes are centred around software systems, remote sensing and the use and maintenance of digital databases, all areas of Canadian expertise.

The geomatics sector can also be considered a strategic tool for enhancing exports of other goods and services, such as natural resources management, infrastructure development and maintenance and environmental management.

Canadian services industries have developed expertise supporting Canada's traditional resource-based industries. As the growth in geomatics exports indicates, Canadians have also been successful in exporting services that reflect the vastness and difficulty of Canada's geography. A partial list of these services includes exploration and surveying, engineering, environmental services, and overland transportation and communications, particularly in sparsely populated regions.

**Specialty Air Services:** This sector is highly regarded internationally, and its expertise is in growing demand in such areas as aerial surveying and mapping, flight training and helicopter operations. Canadian companies have been increasingly successful in winning contracts from foreign governments and multilateral institutions. They are also well positioned to take advantage of private-sector opportunities resulting from the global trend toward internationalization. In particular, the Canadian industry can expect greater opportunities in the U.S. and Mexico as a result of the NAFTA.

#### **Aviation/Aerospace Consulting Services:**

Canada's aerospace manufacturing sector is supported by a significant core of services companies with strong capabilities in aerospace engineering, systems engineering, project management, systems integration, integrated logistics systems, international market development, software development, air navigation systems and airport planning, facilities management and training.



The primary export markets for these services industries have been the United States and European Union (EU) countries with their indigenous aircraft design and/or manufacturing industries. Although these markets will continue to be important, the major area of growth in demand over the next few years is expected to be the Pacific Rim. Substantial opportunities are also foreseen in former Warsaw Pact countries as they move to commercialize advanced aerospace technologies and build the necessary aviation infrastructure.

**Education and Training Services:** Enormous needs for education and training services will exist in the developing world, the former Soviet Union (FSU) and Eastern Europe, as well as in commercial markets in the Organization for Economic Co-operation and Development (OECD). Trends indicate that aid agencies are providing increased funding for these types of services. Along with traditional course materials, many Canadian firms are developing technology-based training, including multimedia applications that can be linked to telecommunications systems for distance education.

**Franchising:** As a growing number of developing countries have liberalized their economies, both opportunities for and interest in franchising have increased. Businesses, governments and international agencies in these developing markets see franchising as a means of transferring business know-how and improving distribution networks and delivery of services, for example. In addition to traditional markets such as the U.S. and Western Europe, opportunities exist in Mexico, South America, China and Southeast Asia, and Eastern Europe.

**Trading Houses:** Over 60 percent of Canada's non-U.S. exports (\$22 billion) are handled by trading houses. This diverse sector comprises some 800 to 1000 companies, most of which are small- to medium-sized. On a combined basis, trading houses are active in all products and markets around the world. Their strength lies

in their extensive international contacts, networks, expertise and knowledge of market opportunities. Despite this, trading houses are not well understood and are under-utilized, particularly by Canadian SMEs, which can use them to leverage their export efforts.

Trading houses play a significant role in Canadian exports to the Caribbean, the Middle East, Japan, the subcontinent and the FSU. They are growing in their importance to exports to Latin America. Trade-development activities are directed at trading house missions to the Caribbean, Central America and the Middle East. DFAIT has worked with regional partners to deliver specialized trade events to link export-ready Canadian suppliers to trading houses in a trade show and seminar format.

**Distribution:** Retail, food services and wholesale services are benefiting from the relaxation of trade barriers and the opening up of markets. Firms in the first two sectors in particular are demonstrating increased interest in such key markets as the Pacific Rim and Mexico.

**Transportation and Logistics Services:** Canadian air, marine, railway and motor carriers, and the ancillary logistics services that support Canadian trade are expanding into foreign markets to take advantage of opportunities created by the NAFTA and rapid economic growth regions such as Southeast Asia.

Canadian airlines have an extensive international network of scheduled and charter services, while specialized air service operators, such as helicopters, have a growing global presence. New opportunities are being created through intergovernmental negotiations for bilateral air agreements and NAFTA provisions for speciality air services.

Canadian ports, shipping agents, ship operators and freight forwarders have a broad international clientele of importers, exporters and carriers, growing in concert with the expansion of Canada's trade. Canadian coastal and lake

shipping continues to provide critical services for Canada-U.S. trade.

Canadian railways own lines in the United States, and focus on north-south trade flows, where Mexico is a growing market. The railways have made massive new investments in intermodal equipment and infrastructure, while entering into strategic alliances with U.S. carriers, to provide high-quality service to trade.

Similarly, the Canadian trucking industry is a major factor in north-south trade flows. With the implementation of the NAFTA and the conclusion of the Canada/Mexico border access agreement, Canadian truckers are developing further plans to enter Mexico. Additional penetration of markets in the United States and Mexico will depend on the resolution of standards issues.

**Business Services:** These are well developed in such high-technology fields as biotechnology, research laboratories, computer communications and systems integration and software, including related training and after-sales services.

## Contacts

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Business Services Industries Branch  
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Fax: (613) 952-9054

Department of Foreign Affairs  
and International Trade  
Services Industries and Transportation Division  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 996-2964  
Fax: (613) 996-1225

## Business, Professional and Educational Services

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Education Study in Mozambique and Zimbabwe	Apr-95	Harare	DFAIT	613-944-6586
Education Mission to Middle East	May-95	Amman	DFAIT	613-944-6346
Instructa '95 - Info Booth	Feb-96	Johannesburg	DFAIT	506-851-6440
<b>Asia-Pacific South</b>				
Education Fair - Philippines - Info Booth	Aug-95	Manila	DFAIT	613-995-7659
Hi Tech Promotion - Solo Show	Jan-96	Medan	DFAIT	613-992-0959
<b>Canada</b>				
Banff TV Festival	07-Jun-94	Banff	B.C.	604-660-2732
Team Canada Networking Seminar	25-Jan-95	Montréal	IC	514-283-8795
Incoming Microelectronics Photomics Mission from Germany	May-95	Canada/Various	IC	613-399-0409
Architectural & Engineering Opportunities in Mexico - Seminar	12-Nov-95	Various, Atlantic Canada	IC	506-851-6440
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Ocean Remote Sensing Mission to Russia	11-Jun-95	St. Petersburg	IC	902-426-8454
Brno International Engineering Fair - National Stand	11-Sep-95	Brno	DFAIT	613-996-7107
<b>East Asia</b>				
Canadian Architect/Designer Mission to Taiwan	Jun-95	Taipei, Taichung	IC	613-954-2956
Airport and Construction Mission to China	06-Sep-95	China	IC	613-954-2956
Computer Assisted Learning Show - Incoming Visitors	Oct-95	Toronto	DFAIT	613-995-2807
<b>Latin America and the Caribbean</b>				
Mission to Mexico	TBD	Mexico City	IC	613-954-2951
Engineering and Architectural Services Mission - Caribbean	Jun-95	Kingston, Belize City	IC	613-943-8807
Education Fair - Barbados - Outgoing Mission	Jun-95	Bridgetown	DFAIT	613-943-8807
Mission of Engineers, Architects and Constructors	08-Jun-95	Mexico	IC	506-851-6440
Targeting Opportunities through EDC Lines of Credit - Seminar	22-Oct-95	Montréal	IC	514-283-8795
Consulting Services and Trading Houses Mission - Jamaica	Nov-95	Kingston	DFAIT	613-943-8807
Trading House Mission	Nov-95	Caribbean/Various	DFAIT	613-943-8807

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
<b>Multiple Markets</b>				
Mission to IFIs and/or Executing Agencies	TBD	Washington, D.C.	IC	613-954-2951
Vancouver Film Festival Trade Forum	Oct-95	Vancouver	B.C.	604-666-1443
Radarsat Promotional Tour	Oct-95	Various	IC	613-954-3166
Sundance Film Festival	Jan-96	Park City	DFAIT	613-944-6577
<b>United States</b>				
Mission(s) to the United States	TBD	Chicago, Dallas, Houston	IC	613-954-2951
Workshops with Associations on Exporting Services to U.S.	TBD	Canada/Various	DFAIT	613-944-9440
Internet System for Western Canadian & U.S. Architects	TBD	Minneapolis	DFAIT	613-944-9440
Environmental Services Mission to Georgia and Florida	Apr-95	Atlanta, Miami	DFAIT	613-944-9440
Media Presentation(s)	Apr-95	New York, N.Y.	DFAIT	613-944-9440
Market Study - Commercial Education/Training Opportunities	Apr-95	Los Angeles	DFAIT	613-944-9440
Market Study of Services Trade Press	Apr-95	New York, N.Y.	DFAIT	613-944-9440
Profiling Financial Services Firms in New England	Apr-95	Boston	DFAIT	613-944-7348
Intermodal '95 National Stand	May-95	Atlanta	DFAIT	613-944-9440
American Institute of Architects - Info Booth and Mission	May-95	Atlanta	DFAIT	613-944-9440
Franchising Mission to Chicago	May-95	Chicago	DFAIT	613-944-9440
Media Presentation	May-95	Detroit	DFAIT	613-944-9440
Financial Services Market Opportunities Study in Southeast U.S.	May-95	Atlanta	DFAIT	613-944-9440
Vancouver-L.A. Sister City Producers Mission	05-May-95	Los Angeles	B.C.	604-666-1443
Miami Niche Banking Facilities - Study	07-May-95	Miami	IC	514-283-8795
Matchmaking Mission, Local Services Industries	Jun-95	Buffalo	DFAIT	613-944-9440
NEBS Mission for Professional Trainers	Jun-95	Minneapolis	DFAIT	613-944-9440
Market Study - Advertising and Publicity Opportunities	Jul-95	Buffalo	DFAIT	613-944-9440
New England Media Presentation - IT Services	Sep-95	Boston	DFAIT	613-944-9440
Geomatics Roundtable - Mini Workshop	Sep-95	Boston	DFAIT	613-944-9440
Health-care Services Mission	Oct-95	Chicago, Houston	DFAIT	613-944-7348
Commercial Education/Training Mission	Oct-95	Detroit	DFAIT	613-944-9440
"Partners by Design" - Canadian Architectural Presentations	Oct-95	Washington, D.C.	DFAIT	613-944-9440
U.S. Mission to Buildings & Environment Conference	Nov-95	Toronto	DFAIT	613-944-9440
Market Study - Upstate New York Design Community	Nov-95	Buffalo	DFAIT	613-944-9440
Accessing U.S. Business - Seminar	Dec-95	Seattle	DFAIT	613-944-9440
Market Study - Construction/Architectural Services	Dec-95	Atlanta	DFAIT	613-944-9440
Mid-Atlantic Commercial Education & Market Opportunities Study	Jan-96	Washington, D.C.	DFAIT	613-944-9440
Architects Mission to the Lake Superior Design Retreat	Feb-96	Duluth	DFAIT	613-944-9440

Activity	Date	Location	Dept.	Contact
Architectural Engineering Market Study	Feb-96	New York, Pennsylvania, West Virginia	DFAIT	613-944-9440
Mid-Atlantic U.S. Professional Services Market Study	Feb-96	Washington, D.C.	DFAIT	613-944-9440
"The Canadian Invasion" - Exhibition of Canadian Architecture	Mar-96	Los Angeles	DFAIT	613-944-9440
"Partners in Education" - Canadian Presentations	Mar-96	Washington, D.C.	DFAIT	613-944-9440
Industrial Services Market Study	Mar-96	Buffalo	DFAIT	613-944-9440
American Institute Architects - National Stand	Nov-96	Minneapolis	DFAIT	613-944-7486

### Western Europe and European Union

Civil Engineering Construction Partnering Project	May-95	Copenhagen	DFAIT	613-995-4730
Canada-Germany Science & Technology Consultations	Oct-95	Ottawa	IC	613-990-4096







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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Chemicals

The chemicals industry makes more than 60 000 products from a wide range of metals, minerals, crude oil, natural gas, vegetable oils, animal fats and other raw materials. These products include commodity inorganic and organic chemicals, resins, elastomers, fertilizers and crop protection chemicals, fine and specialty chemicals as well as pharmaceuticals, paints and varnishes, soap and cleaning compounds.

Chemicals, in general, fall into two categories, basic (or commodity) and specialty chemicals. Basic chemicals are traded globally and rely on the supply of feedstock and manufacturing economies. Specialty chemicals, on the other hand, are more narrowly focussed geographically, have higher value-added, and require greater service and distribution support.

### International Environment

Chemicals represent a major global industry that accounts for a significant share of foreign direct investment and international trade. Global chemicals production in 1993 was estimated at US\$1500 billion. During the past 10 years, world chemical production has increased at an annual average rate of about 6 percent. The U.S. chemical industry is the world's largest, followed by Japan, Germany and France. Canada ranks as the tenth-largest chemical manufacturer.

Trade in chemicals is fiercely competitive, with producers active on a global scale. Total world exports of chemicals amounted to about US\$325 billion in 1993. Germany was the largest exporter, followed by the United States. About 20 multinational enterprises (MNEs) account for 25 percent of worldwide sales.

Having developed significant petrochemical capacity over the past decade, Middle Eastern countries are now competing with traditional petrochemical exporting countries, such as the United States, Canada, Japan and those of Western Europe. Newly industrialized countries such as South Korea and Taiwan are also developing domestic chemical capacity to satisfy the needs of

growing local markets and to take advantage of export opportunities. The Asia-Pacific region is expected to be the world's fastest-growing chemical market.

Globalization has precipitated an ongoing restructuring of the industry, particularly within Europe and North America. Competition is also increasingly organized along the lines of the three emerging trading blocs: North America, Western Europe and the Asia-Pacific region.

The following factors are having a major impact on the world chemicals industry:

- increasing competition and trade liberalization arising from the Canada-U.S. Free Trade Agreement (FTA), the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT);
- growing public concern about the environment, with respect to the production, marketing and disposal of chemical products, and the resulting demands for new environmentally friendly products and technologies in Europe, North America and Japan;
- changing industry dynamics and product definitions as a result of the evolution of science and engineering and the development of new products that cut across many disciplines;
- continentalization and globalization of industry — individual firms are less likely to grow and prosper without the benefit of mutually reinforcing supplier capabilities and/or close competitors and external innovation catalysts within their domestic or continental industrial cluster;
- the trend among developed economies to emphasize more sophisticated value-added products within the chemicals sector;

■ competition among various units within MNEs for the right to product mandates for certain products.

## Canadian Position

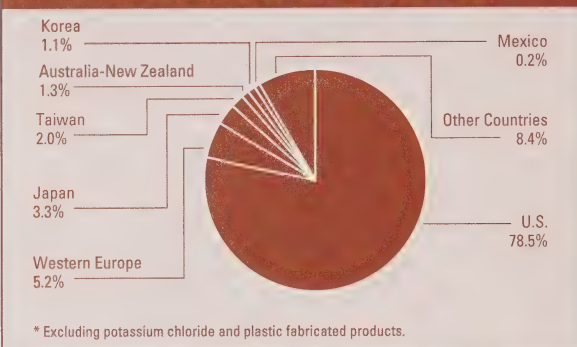
Based on the value of shipments (\$22.5 billion in 1993, representing about 7.2 percent of total manufacturing shipments), chemicals represent Canada's third-largest manufacturing sector. In 1992, employment in the sector was approximately 91 000 — about 5.4 percent of total manufacturing employment. It also ranked third in terms of value-added.

Imports and exports in 1993 totalled \$11.9 billion and \$7.5 billion respectively. Imports represented 44 percent of the domestic market and were composed largely of specialty and formulated chemicals tailored for specific end uses and pharmaceuticals. Exports were primarily commodity products and accounted for 33 percent of factory shipments. Overall, the United States accounted for 77 percent of Canada's imports and received 78.5 percent of our exports (see Figure 1).

In terms of trading patterns, from 1985 to 1993, imports increased from about 29 percent of the domestic market to about 44 percent. Exports grew from 24 percent of factory shipments to 33 percent for the same period. Thus, the industry has significantly increased its dependence on imports to satisfy domestic requirements.

Canadian-owned firms, with some notable exceptions, tend to be small and primarily serve niche markets. For the smallest companies, production is still geared to domestic (often regional) markets. Canadian producers, however, are now beginning to take advantage of the opportunities arising from the FTA, a trend likely to continue with the NAFTA. Many larger MNEs have already rationalized their operations in terms of the larger North American market, resulting in the closure of some Canadian branch plants, and in other cases, expansion to supply North American markets from Canada. There

**Figure 1 — Canada's Principal Export Markets\* for Chemicals and Chemical Products, 1993 (% of Total)**



Source: Statistics Canada, tabulation from Tradesys Tape, July 1994

is concern that rationalization of the Canadian chemical industry has resulted in some loss of autonomy in decision making, as well as the disappearance of some key technical, marketing and management positions from the country.

Compared to their international competitors, Canadian chemical companies have generally tended to be driven by a short-term cost focus as opposed to a long-term innovation focus. There is also a tendency for Canadian companies to be production-oriented, placing insufficient emphasis on global marketing; this is particularly true for small- and medium-sized companies.

Canadian commodity chemicals, particularly the ammonia and petrochemicals subsectors, are highly competitive due to the availability of competitively priced oil and gas. The fertilizer sector is also globally competitive and has a favourable trade balance. In the case of specialty and fine chemicals, however, a large number of proprietary products are imported. In many cases, the Canadian market alone is not large enough to justify production and the sector has not been significantly restructured to supply the larger North American market from domestic facilities. Also, producers frequently rely on raw materials and specialized components that are not readily available in Canada. Overall, Canada has a net

trade deficit for specialty and fine chemicals of about \$1.5 billion.

Nevertheless, the specialty chemicals subsector does support a large number of MNEs as well as many small- and medium-sized enterprises (SMEs), most of which are Canadian-owned. These firms typically have been producing a relatively extensive range of products, in small quantities, almost exclusively for the domestic market. The FTA, however, provides these companies with an opportunity to develop and sell their product lines to a much larger market. In fact, companies should view the United States, particularly the northern states, not as a foreign market but as an extension of their domestic market. These companies will face pressure to rationalize their product lines to become lower-cost producers. As well, given that specialty chemicals are knowledge-based, the sector must look to rapidly adopt new technologies through technology transfer arrangements.

Research and development (R&D) in the Canadian chemicals sector has been limited, in part, by the influence of multinational firms. The existence of high tariffs prior to the FTA made licensing of technology much more cost-effective than carrying out R&D. As a result, there has been an inevitable bias toward acquiring off-the-shelf technology, as opposed to developing it in Canada. However, the current 20-percent non-refundable tax credit available to Canadian companies and the provisions of the Scientific Research and Experimental Development Program (e.g. a fully refundable tax credit of 35 percent up to \$2 million for qualified Canadian-controlled private companies) have established a favourable taxation climate in Canada, which, in some cases, is more favourable than in any other developed country. Senior executives of Canadian operations for MNEs must emphasize to their corporate headquarters the attractiveness of carrying out R&D in Canada, while SMEs should consider this program as a means of innovation for competitive advantage.

With the expected reduction in trade restrictions over the next five years, the chemicals sector can expect further changes as MNEs implement their

global rationalization strategies. Such restructuring should leave their Canadian operations globally competitive. Suppliers to MNEs will also be forced to achieve global competitiveness, if only to maintain domestic accounts in a market that is open to more foreign competition. The growth potential of SMEs will also depend upon their ability to capture new export markets.

## Strategic Direction

Government, in partnership with industry, will work to:

- support and encourage SMEs to be proactive in developing potential export markets and forging strategic alliances;
- continue to identify niche markets such as specialty chemicals and provide timely market information to facilitate exporting by smaller firms;
- encourage companies to be innovative through increased commitment to R&D, both in-house and through the network of technology counsellors in Canadian embassies, to acquire leading-edge technologies;
- encourage companies, particularly SMEs, to form strategic alliances with suppliers, customers and others and to participate in mutually beneficial business networks to secure markets for their products and to stay informed of emerging opportunities;
- encourage industry to invest in productivity enhancement measures to maintain international competitiveness independent of currency fluctuations.

## Action Plan

To achieve the strategic direction outlined above, the following specific activities are proposed:

- initiate action to designate an officer in the Canadian Embassy in Mexico to assist in resolving problems encountered by Canadian

chemical companies (Department of Foreign Affairs and International Trade [DFAIT], Industry Canada [IC]);

- investigate the possibility of positioning a chemical specialist in one of the Canadian missions in the United States (DFAIT, IC);
- arrange, in co-operation with the provinces, more incoming technology missions from countries other than the United States (DFAIT, IC, provinces);
- provide key missions with the information they need to actively pursue the acquisition of new technologies needed in Canada (DFAIT, National Research Council [NRC], IC);
- evaluate the competitive effects of new chemical substances notification resulting from differences in CEPA and TOSCA (U.S.) regulations (IC, Environment Canada [EC], DFAIT);
- develop a directory of consultants in selected foreign countries (for chemicals) to assist SMEs in identifying qualified local consultants (DFAIT, IC);
- update and distribute a directory of Canadian trading houses specializing in exporting chemicals (DFAIT, IC);
- investigate use of Program for Export Market Development (PEMD) funding to hire consultants for foreign market research prior to committing to market development strategies for a chosen area (DFAIT, IC, provinces);
- offer workshops to sensitize and encourage smaller chemical companies to export (DFAIT, IC);
- organize chemicals-specific New Exporters to Border States (NEBS) missions to the United States (DFAIT).

## Contact

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## Plastics

The plastics sector is composed of manufacturers of synthetic resins, compounders of resin, and processors that make plastic products. Plastics machinery is discussed in the Advanced Manufacturing Technologies chapter of the International Trade Business Plan.

### International Environment

Demand for synthetic resins gained strength in North America in 1994, remained strong in Asia, but continued to be sluggish in Europe. As demand in North America improved, price increases became sustainable.

Plastic products do not typically compete in the same global markets as resins. Markets for most products are much more regional, and are mainly North American. In 1994, North American demand for plastic products rose significantly as the overall economy expanded.

During 1994, polyvinyl chloride (PVC) resin and products showed the best gains, reflecting the dominant position of PVC resin in the construction and automotive sectors, both of which experienced significant growth during the year. The growth in PVC consumption occurred at the same time that resin and its products underwent increased environmental scrutiny in North America, along with all chlorine-based technology. The industry is currently working with governments to assess the life-cycle impacts of PVC and its precursors on the environment.

### Canadian Position

Resin production is dominated by multinational enterprises (MNEs) including Novacor, Dow Chemical, Geon, Imperial Oil, Himont and Shell. Only Novacor and two smaller producers, AT Plastics and Petromont, are Canadian controlled. The compounded resin and plastic products sectors are dominated by small- to medium-sized enterprises (SMEs), most of which are Canadian owned and controlled.

The principal market for synthetic resins is the plastics processing industry, with the secondary market being formulated chemicals. Based on 1993 information, the synthetic resin industry employed 10 500 people. Domestic shipments were \$2.6 billion, with imports of \$2.2 billion and exports of \$1.6 billion. Alberta is the only province that had a trade surplus. The United States was the destination for 80 percent of exports and the origin of 90 percent of imports.

Plastic products are used in a broad range of applications, the most substantial being packaging, construction, automotive and electrical/electronic. (The trade strategy for automotive industries is discussed in a separate chapter.) In 1993, the industry employed 50 000 people, with shipments of \$6.1 billion, imports of \$2.7 billion and exports of \$1.8 billion. Exports have been growing faster than imports, and in real terms, the trade deficit declined slightly in 1993. Approximately 90 percent of export trade and 80 percent of import trade has been with the United States. These figures have been relatively constant over time, reflecting the impact that transportation costs have on product movement.

Within these industries, the products offering the greatest potential for improving Canada's trade balance are synthetic resins, high-performance compounded resins, construction products and packaging.

Plastic products with export potential to distant markets are those that offer a technological advantage. Otherwise, the prospects for direct export are limited, and the main opportunity for Canadian companies lies in the exporting of technology through joint ventures or acquisitions in foreign markets.

## Synthetic Resins

### Priority Countries

Argentina  
China/Hong Kong  
Indonesia  
Japan  
Malaysia  
Mexico  
United States  
Venezuela

All synthetic resins showed strong export growth during 1994. The biggest gains in absolute terms were made by the commodity resins (polyethylene, polypropylene, polystyrene, ABS and PVC). Solid growth also occurred in engineering resins such as acrylic, nylon, polyester and polycarbonate.

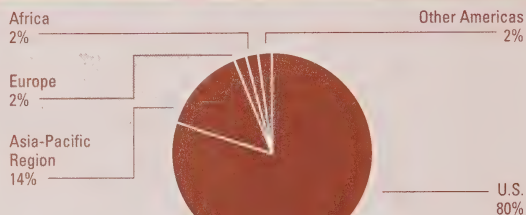
Typically, less than 70 percent of exports have gone to the United States, with more than 30 percent going to the Asia-Pacific region. During 1993-94, U.S. demand for synthetic resins has been very strong, reflecting the overall strength of that economy. Even though Asian demand remained strong, prices in that part of the world decreased as local capacity increased. Since higher margins were achievable by shipping to the United States, the trade flows adjusted accordingly.

China is the largest export market in the Asia-Pacific region, but its annual demand varies considerably. Initiatives leading to increased penetration and predictability in China would be valuable to Canadian exporters. Other markets in Asia-Pacific offer long-term potential. While resin capacity is being strengthened in many of these countries, the region is still expected to be a net importer for some time.

Many Central and South American economies are also experiencing rapid growth and offer good potential for resin exports.

Resin-exporting companies possess extensive international sales networks. The Government can assist these companies primarily in foreign market access.

**Figure 1 — Destination of Synthetic Resins Exports, 1993  
(% of total)**



Source: Industry Canada

## Compounded Resins

Compounded resins are produced by blending functional additives with synthetic resins, yielding feedstock for plastic processors. Trade information on this group of materials cannot be isolated from data on synthetic resins. However, feedback from previous international activities suggests that China and the Middle East are two areas that hold good export potential for high value-added compounds.

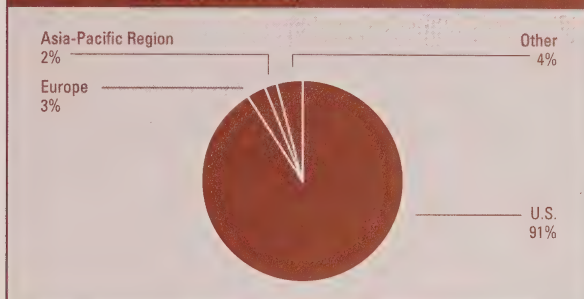
## Construction Products

### Priority Countries

Argentina  
France  
Germany  
Japan  
Mexico  
Taiwan  
United States

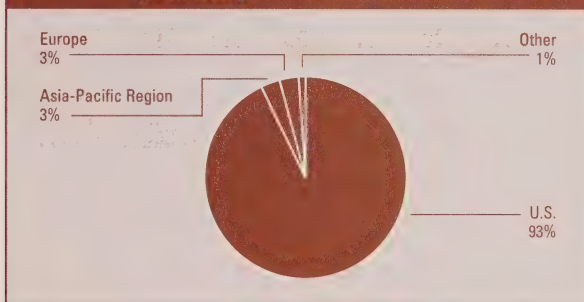
The United States is the main export destination for construction products. Exports to all regions of the U.S. have increased over each of the past three years. There are still situations where non-tariff barriers impede market penetration, including "Buy America" policies, product-marking requirements and standards differences.

**Figure 2 — Destination of Construction Products Exports, 1993 (% of total)**



Source: Industry Canada

**Figure 3 — Destination of Packaging Exports, 1993 (% of total)**



Source: Industry Canada

While trade to the rest of the world is comparatively small, exports to certain countries have shown strong growth. These have been highlighted as prospects for trade promotion activities.

### Packaging

#### Priority Countries

Australia  
China/Hong Kong  
France  
Mexico  
New Zealand  
Taiwan  
United Kingdom  
United States

Again, exports to the U.S. dominate the packaging sector, while other growth countries that are listed as priorities are scattered throughout the world.

Demand for packaging closely follows growth in the economy. Plastics packaging is still gaining market share at the expense of other materials. Sustaining this trend will depend, however, on the industry fulfilling its obligations in solid waste management.

## Strategic Direction

The Ontario government convened a series of discussions with the plastics industry in 1993-94. The most tangible result of this process was a document entitled *A Winning Strategy*. Assuming its implementation, a measure of the success of the strategy would be a 50-percent decrease in Ontario's existing trade deficit in plastic products by 1999. This would come from a combination of import replacement and export development. The strategy recommends that trade promotion and a market development institute be established for the plastics industry, which would offer companies assistance with all aspects of exporting, on a fee-for-service basis.

The future growth potential of the Canadian plastics industry will be largely dependent on its ability to expand export markets. Access to the best available information is important as companies strive to remain internationally competitive. With this objective, and in collaboration with industry, the federal government will:

- prepare and disseminate a Sector Competitiveness Framework on the plastics industry that will be used as a tool to assist both company and government decision makers (Industry Canada [IC]);
- prepare and disseminate an electronic product called INSIGHT that will provide easier access to information on government programs and services, and strategic business information (IC);

- support the infrastructure that provides technology services to the industry as a means of encouraging companies to gain competitive advantage through technology (IC, National Research Council [NRC]);
- organize Canadian stands at selected international trade shows. Although Canadian exhibitors fall mostly within the machinery and mould industry, processors also benefit from peripheral events that are arranged in conjunction with the shows (Department of Foreign Affairs and International Trade [DFAIT]/missions);
- explore the possibility of an interchange agreement that would second government staff to an export council servicing the plastics industry (DFAIT, IC);
- conduct benchmarking studies so companies can better position themselves in relation to Canadian and foreign competitors (IC);
- improve trade commissioners' knowledge of the needs and capabilities of the plastics industry.

## Contact

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## Advanced Materials

**A**dvanced materials (AM) constitute a spectrum of new materials and processes that allow for the design and manufacture of products with novel and improved properties. The materials can be used either in structural applications (e.g. in the construction and automotive sectors), or in functional applications (e.g. uses that exploit electronic and superconductive properties). The AM field is not considered a sector like others. There are only a few small- and medium-sized enterprises (SMEs) operating solely in the field. For large firms such as Inco, Noranda, Alcan, and Sherritt Inc., advanced materials comprise a significant portion of research and development (R&D) efforts, but represent only a limited percentage of revenues.

Advanced materials include metals, ceramics, polymers and their composites. They are high value-added materials at the early stage of the product life cycle, with enabling capabilities for many industries.

### International Environment

The market for advanced materials is difficult to estimate. The field is highly diversified, with differing definitions and scarce production and consumption data. Harmonized System (HS) or Standard Industrial Code (SIC) statistics are not sufficiently refined to be able to segregate information on advanced materials. Nevertheless, it is estimated that the world market for AM will be \$450 billion by the year 2000, with the U.S. market representing 50 percent of the total.

Despite the rapid reduction in defence spending in recent years, combined with an economic slowdown throughout the industrialized world, AM markets continue to show strong growth, particularly in the transport sector in response to environmental pressures to design with lightweight and recyclable materials. In civilian structural applications such as bridges, seaports and buildings, Japan, Europe and more recently, the United States, have deployed initiatives to demonstrate and validate the use of AM (e.g. fibre-reinforced concrete, polymer composite reinforcing bars) in these new markets.

The market for advanced composites shipments in the U.S. was approximately US\$2.7 billion in 1993, and is expected to grow to US\$2.9 billion in 1994, an increase of 6.2 percent. Overall, composites continue to grow at roughly twice the rate of the gross domestic product (GDP) of industrialized countries. Although metal and ceramic matrices are expected to have average annual growth rates of about 20 percent, their combined value is less than 5 percent of the total forecast for advanced composites in 1993. Japanese and European markets are expected to show similar growth rates.

The world market for advanced ceramics in 1993 was approximately US\$18 billion, an increase of 20 percent over the previous year. The world market for all ceramics (glass, refractories, porcelains, etc.) was US\$90 billion in 1993. The world's top five advanced ceramics producing companies are:

- Philips Electronics (Netherlands) US\$4.1 billion;
- Kyocera (Japan) US\$3.1 billion;
- Murata Manufacturing (Japan) US\$2.2 billion;
- Saint-Gobain (France) US\$1.4 billion;
- Corning Inc. (United States) US\$1.2 billion.

*(Source: Ceramic Industry 1993 survey)*

The advanced ceramics market continues to grow rapidly, with eight new plants constructed in 1993, six in the United States, one in the Czech Republic and one in Japan. The recession in Europe and an economic slowdown in Japan have



reduced market opportunities for advanced ceramics in these markets, although this situation is expected to improve in 1995-96.

## Canadian Position

Canada's current AM segment is small in dollar terms, relative to traditional materials, and is a marginal player in this sector compared to Europe, Japan and the United States.

A recent study on the polymer composites market in Canada, sponsored by the Canadian Association for Composite Structures and Materials, established the market at \$1.4 billion in 1993. Approximately 20 percent of this market can be classified as advanced polymer composites.

Increasingly, Canada's large metal processing companies are undertaking the development, production and marketing of new value-added materials. Alcan, for example, is the world's largest manufacturer of aluminum matrix composites. Other firms such as Inco, Noranda and Sherritt Inc. are actively pursuing AM development opportunities.

Canada possesses niche strengths in sectors such as metal matrices, metal powders, ceramics and polymers, and there is room for substantial growth in the long term.

## Strategic Direction

In 1995-96 attention will be concentrated on providing Canadian SMEs with better access to international AM technology and market information from the United States, Europe and Japan. International networking opportunities will be supported at conferences, through workshops and between firms, to promote technology inflow, joint R&D partnerships and the development of new markets. Emphasis will be placed on firms that produce new materials, and those that have unique applications of new materials. R&D and marketing alliances will be brokered between

firms, with special attention to applications in the automotive, construction, aerospace, medical device and other niche market sectors. Consistent with these initiatives, Industry Canada (IC) and the Department of Foreign Affairs and International Trade (DFAIT) will:

- prepare and disseminate INSIGHT, an electronic product providing information on Canadian companies, gateways and stakeholders in advanced materials (IC);
- financially support two Canadian international conferences, Enercomp '95, on composite materials and energy, and ICCM-10, on composite materials (IC, DFAIT);
- seek opportunities under Canada-U.S. defence development and production sharing agreements. The U.S. is the priority export market for Canada's AM manufacturers. The U.S. economic recovery, combined with improving competitive advantages vis-à-vis the major overseas industrial economies, is expected to provide strong growth in investments of new materials production facilities and applications. The U.S. market presents a fertile ground for technology acquisition and the commercialization of AM-based products and processes (DFAIT, IC);
- organize a forum of SMEs, industrial technology agents, government laboratory representatives and technology officers from the U.S., the European Union (EU) and Japan, to exchange information on technology and investment inflow needs and opportunities in AM and export market intelligence (DFAIT, IC, National Research Council);
- in conjunction with industry, government and academia, work on the development of a technology inflow network (including creation of partnerships) and export market opportunities (DFAIT, IC);
- explore linkages with Japan, which has established technological strength in AM and is an important source of technology. The Japan Science and Technology Fund,

administered by DFAIT, will continue to support a variety of co-operative science and technology activities. Specifically, Japan's work in composites technology for bridges and structures may find commercial applications in North America. There is also growing interest on the part of Japanese auto manufacturers to increase their use of light metals such as magnesium and aluminum, including composite forms (DFAIT);

- enhance the collection and dissemination of technology and market intelligence reports from key missions (DFAIT, IC);
- seek strategic opportunities to forge co-operative ventures between Canadian and European partners in advanced materials, such as aerospace, construction products and surface transportation equipment. Some European firms have unique capabilities in polymer composites, and have made impressive progress in developing commercial civilian applications of these materials (DFAIT/missions);
- support participation and networking of Canadian firms at Journée européenne des matériaux composites, Europe's benchmark conference on composite materials (DFAIT, IC).

## Contact

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## Chemicals, Plastics and Advanced Materials

Activity	Date	Location	Dept.	Contact
<b>Canada</b>				
Sector Expert Group on Advanced Materials	TBD	Ottawa	IC	613-954-3114
SME International Markets Technology and Investment Forum	TBD	Ottawa	IC	613-954-3114
<b>Latin America and the Caribbean</b>				
Buyers' Mission from Mexico to Plast-Ex '95	May-95	Toronto	DFAIT	613-995-8742
Mission of Chemical Buyers from Trinidad	May-95	Toronto, Montréal	DFAIT	613-943-8807
Brasilplast '95	18-May-95	Sao Paulo	DFAIT	613-996-5549
<b>Multiple Markets</b>				
Insight - Chemicals & Plastics	Ongoing	Ottawa	IC	613-954-3016
Plastics Sector Competitiveness Framework	Apr-95	Ottawa	IC	613-954-3016
Plast-Ex '95 - International Pavilion	May-95	Toronto	Ontario	416-325-6661
Enercomp '95	08-May-95	Montréal	IC	613-954-3114
Power Metallurgy - TEC '95 World Congress	14-May-95	Seattle	IC	613-954-3118
Tenth International Conference on Composite Materials	14-Aug-95	Whistler	IC	613-954-3140
K '95: Plastics Show	Oct-95	Dusseldorf	DFAIT	613-996-1530
<b>United States</b>				
Seminar on U.S. Market Opportunities for Chemical Products	TBD	Ontario, Montréal, Calgary	DFAIT	613-944-7486
Buyers Mission from U.S. to Plast-Ex '95	May-95	Toronto	DFAIT	613-944-7486
Database of Plastics Processing Equipment Fabricators	Jun-95	TBD	DFAIT	613-944-7486
Market Opportunities Study of Plastics Processing Equipment	Sep-95	TBD	IC	613-944-7486
Outgoing Mission of Mould & Dye Manufacturers to U.S.	Dec-95	Akron, Cleveland	DFAIT	613-944-7486
NEBS Mission to Chem Show	Dec-95	New York	DFAIT	613-944-7486
<b>Western Europe and European Union</b>				
Journées européennes de composites	26-Jul-95	Paris	IC	613-954-3114

Note: Dates and locations are subject to change.







## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Produits de construction.*



## Construction Products

Construction products, as defined in this section, consist of two sectors: metal and mineral-based products and wood-based products. Similar plastic products are dealt with in the Chemicals, Plastics and Advanced Materials section of the International Trade Business Plan, as are wood industries in the Forest Industries section.

World trade in construction and building products has grown substantially in the past 10 years in line with economic globalization. The U.S. Department of Commerce reported in the Winter 1993 edition of *Construction Review* that international trade in building products totalled over US\$100 billion in 1990, nearly double the trade in the mid-1980s.

In 1993, it is estimated that Canadian exports of wood-based and metal and mineral-based construction products accounted for nearly \$1.9 billion (see Figure 1). Domestic construction and building products manufacturers are becoming increasingly aware of international opportunities, and new markets are being developed around the world for a wide range of products.

There are over 35 countries exporting construction and building products; most of them are concentrated in Europe and North America. Major exporters include Germany, France, Belgium, the Netherlands, Italy, the United Kingdom, Austria, the United States and Canada.

With the rapidly expanding world population and significant housing deficits, a major emphasis in trade in construction products will be on housing products and systems. A task force involving Canada Mortgage and Housing Corporation (CMHC), Industry Canada (IC), the Department of Foreign Affairs and International Trade (DFAIT), the National Research Council (NRC), and Natural Resources Canada (NRCan) was established in early 1994, with the mandate to develop housing strategies for the industry. Extensive consultation has been completed with the industry regarding export issues and possible ways to address them. In the coming year, the task force will focus on the development of export strategies and guidelines for firms in the industry.

**Figure 1 — Canadian Exports of Wood-based, Metal and Mineral-based Construction and Building Products in 1993**

Total Exports \$1.871 billion

Mineral-based  
35%

Metallic  
25%



Wood-based  
40%

Source: Industry Canada



## Metal and Mineral-based Products

The metal and mineral-based construction and building products industry consists of companies that manufacture a wide range of products. These include products such as nails, aluminium siding, metal doors and windows, metal buildings, cement, gypsum wallboard, mineral wool insulation, clay brick and building stone.

## International Environment

According to the U.S. Department of Commerce analysis cited earlier in this section, metal and mineral-based construction products accounted for one half of world trade in building products in 1990. Metallic products represented 31 percent and mineral-based products 19 percent of world trade. Leading exports included iron and steel structures and parts; iron and steel big sections; aluminium plate, sheet and strip; cement; and brick, non-refractory and glass building products. In international markets in 1990, Canada ranked as one of the top 10 exporters of the following products:

<b>Metallics</b>	<b>Mineral-based</b>
Aluminium plate, sheet and strip	Cement
Iron and steel nails, etc.	Gypsum and plasters
Iron and steel sections	Cement and artificial stone products
Cast iron pipe	

With the liberalization of trade that is taking place around the world, previously closed home markets in Asia, Latin America and the former communist bloc countries are gradually being opened up. More North American and European construction products are finding their way into these markets. Over the next 5 to 10 years there should be a rapid expansion in trade in construction products. As competition increases, everyone

should benefit from more innovative new products, lower prices and better services.

## Canadian Position

In 1993, exports of metal and mineral-based construction and building products were estimated to be \$1.121 billion (see Table 1). The

**Table 1 — Metal and Mineral-based Construction and Building Products, 1993**

	<b>\$ million</b>			
	<b>Exports *</b>		<b>Imports *</b>	
<b>Metallics</b>				
Hollow Structural Sections	188	(187)	10	(09)
Structures and Structural Parts	114	(96)	65	(59)
Metal Fasteners	84	(83)	48	(29)
Metal Windows and Doors	46	(38)	64	(63)
Metal Plumbing Fixtures	21	(15)	45	(33)
Other	19	(16)	31	(24)
<b>Total Metallics</b>	<b>472</b>	<b>(435)</b>	<b>263</b>	<b>(217)</b>
<b>Non-metallics</b>				
Cement	201	(199)	43	(42)
Insulation	87	(81)	146	(140)
Flat Glass	84	(59)	141	(130)
Asphalt Roofing	78	(68)	40	(39)
Concrete Products	61	(60)	34	(30)
Finished Stone Products	54	(50)	74	(28)
Gypsum Products	36	(34)	9	(7)
Fabricated Glass Products	36	(29)	65	(48)
Other	12	(11)	193	(63)
<b>Total Non-metals</b>	<b>649</b>	<b>(591)</b>	<b>745</b>	<b>(527)</b>
<b>Total Mineral-based Construction Products</b>				
	<b>1121</b>	<b>(1026)</b>	<b>1008</b>	<b>(744)</b>

\* Figures in brackets denote trade with the United States.

Source: Statistics Canada

major export market continues to be the United States, which absorbs over 90 percent of the total. Overall, exports are slightly higher than imports, with metal construction products exceeding imports by nearly 80 percent. Mineral-based imports are slightly higher than exports, however, in part reflecting a trade deficit in ceramic tiles, flat glass, insulation, finished stone products and fabricated glass products.

There are over 6000 establishments in the metal and mineral-based construction products sector employing 145 000 people. Most of the companies are small- and medium-sized, but there are some major firms in the metal fabricating, cement, insulation and flat glass industries. Many of the larger companies are foreign internationals.

Traditionally, construction products manufacturers have concentrated on the domestic market. This is changing, however, with more emphasis being placed on exporting. In international markets Canadian construction products are known for their superior quality, which in part is dictated by the extreme weather conditions experienced in Canada. In markets such as Japan, the price of Canadian metal and mineral-based construction products is very attractive when compared with locally produced products. High transportation costs, trade barriers and differences in codes and standards in other countries are deterrents to trade, but progress is being made to minimize these constraints.

## Strategic Direction

- Because of its size and proximity, the United States will continue to be the major export market for Canadian metal and mineral-based construction products. To maximize trade opportunities, the following activities are planned for 1995-96:
  - companies, particularly small- and medium-sized firms, will be encouraged to participate in key construction materials trade shows such as the National Association of Home

Builders (NAHB) show as well as a number of regional shows and government-sponsored events (Industry Canada [IC], DFAIT);

- incoming missions are being organized to foster a better understanding of Canadian capabilities. Outgoing missions will provide potential exporters with insights into the U.S. market (DFAIT/missions, IC);
- several niche market studies, such as one on commercial building products (Buffalo), will be undertaken in various regions of the United States and made available to interested Canadian firms (DFAIT/missions).
- Another important objective is to increase the visibility of Canadian metal and mineral-based construction products in other parts of the world which have rapidly expanding economies:
  - Mexico, as a North American Free Trade Agreement (NAFTA) partner, shows considerable potential for construction products. Several trade events are being organized to introduce more Canadian companies to this market. In other Latin American countries, information booths are being included in important domestic construction materials trade shows (DFAIT/missions, IC);
  - in Japan, there will be strong government support for key national, regional and solo trade shows involving construction products. A building standards harmonization mission to Japan is also planned for 1995-96, along with some buyers' missions to Canada;
  - China is considered one of the most promising markets in the world for Canadian construction products. Initial steps are being taken to develop this market through strategic participation in construction trade shows and the organization of seminars in major Chinese cities (DFAIT/missions, IC);
  - economic growth in Singapore and other Asian countries means that there is a large potential for Canadian building and

construction materials. An information booth is planned for Sibex '95, a major construction materials show in Singapore (DFAIT/missions);

- the construction sector in Indonesia is undergoing a boom. As a follow-up to a successful presence at Building and Construction Indonesia '94, DFAIT will have an information booth at the 1995 event (DFAIT/missions, IC);
- in Saudi Arabia the construction sector is also booming. In recognition of the market potential DFAIT will have an information booth at Saudi Build '95 (DFAIT/missions, IC);
- in Europe the Canadian government will have a national stand in Paris at BATIMAT '95 and an information booth at BATIBOUW in Belgium (DFAIT/missions, IC).

- Industry Canada, DFAIT and other federal government departments and agencies, in co-operation with the provinces, have an important role to play in providing the domestic industry with market intelligence on foreign markets. This is being accomplished through personal contact and the publication of reports such as "Opportunities in Mexico: The Construction Products Market" (IC, DFAIT).

## Wood-based Building Products

The wood-based building products industry consists of firms that manufacture a wide range of value-added building products such as kitchen cabinets, wood windows, wood doors, prefabricated buildings, mobile homes, wood flooring, mouldings, solid wood panelling and millwork. While the sector is small relative to the Canadian lumber and panel products industries, it generates substantially more employment and value per unit of wood than does primary production.

## International Environment

Worldwide trade in wood-based building products was estimated at approximately \$7.1 billion in 1993, and has been growing over the last few years at an annual rate in excess of 23 percent. This strong growth is expected to continue into the future as more countries place higher priority on adequate housing for their citizens. The Canadian share of this market stands at about 8 percent and has been primarily with the United States, which annually accounts for approximately 80 percent of total exports and over 65 percent of total imports.

In recent years, however, Canada has made some inroads into other markets such as Japan and more recently Mexico, and while exports to these markets are still relatively small in comparison to the United States, the potential for significant export growth in these market areas is high.

## Canadian Position

Table 2 outlines the basic structure of the Canadian wood-based building products industry in 1993.

Major strengths of the industry lie in the ability of many of the companies to give close personal attention to customers' desires and product specifications. Also, Canadian production facilities in the industry are well suited to respond to small orders, both domestically and internationally, and the Canadian industry is known for its quality, reliable service and innovative products. These strengths have enabled many of the companies to develop niche markets and to become world leaders in innovative product development designed to conserve energy, stemming from experience with Canada's climatic extremes.

While many of the companies are not as highly skilled in marketing and market development as their overseas and larger U.S. counterparts, the more progressive companies have established their products in the United States, Western Europe, Japan and more recently Mexico. For example, a number of companies in the kitchen cabinet, wood door and window, and manufactured housing and log home sectors have developed healthy niche markets in the United States and Japan.

## Strategic Direction

To expand market opportunities for the Canadian wood-based building products industry, government, in conjunction with the industry, will:

**Table 2 — Canadian Wood-based Building Products Industry, 1993**

	Number of establishments	Number of shipments	Number of employed	(\$ million)	
				Exports	Imports
Kitchen Cabinets	460	850	10 500	93	29
Wood Windows	400	735	6 850	30	32
Wood Doors	300	565	5 650	40	42
Prefab. Bldg.	250	465	3 650	97	75
Mobile Homes	70	130	1 150	15	158
Other Millwork	720	1185	14 100	475	297
<b>Total</b>	<b>2200</b>	<b>3930</b>	<b>41 900</b>	<b>750</b>	<b>633</b>

- continue to focus its primary interest on the United States and Japan with a secondary effort aimed at certain niche markets in Europe, namely Britain, Germany and France, and developing countries such as Mexico;
- continue to encourage small- and medium-sized companies in the wood-based building products sector to participate in key construction trade shows such as National Association of Home Builders (NAHB), the Northeast Construction Show and the Kitchen and Bath Show in the United States; the Tokyo Home Building Show in Japan; and Construxpo in Mexico. In Europe, support will continue for Batimat in Paris and Interbuild in the United Kingdom, both of which have proven highly successful for Canadian companies in the past (DFAIT/missions, Industry Canada [IC]);
- continue to support incoming missions of key builders, buyers, architects and local government building officials to visit Canadian trade shows, associations and Canadian building products manufacturers (DFAIT/missions, IC);
- increase Canadian visibility as a viable and competitive building products supplier by capitalizing on the imminent signing of the Memorandum of Understanding on Building Standards between Canada and Japan. To this end, a building standards mission to Japan is planned in 1995-96 (DFAIT/missions, IC);
- continue support of the Co-operative Industrial and Market Development Program (CIMDP) in British Columbia in developing export markets for secondary wood products in key export markets such as the United States, Europe and Japan. This program uses funding under the Forest Industries Sector Campaign, and is now into its second five-year term. In the future, this program is expected to be expanded to other regions of Canada (DFAIT/missions, IC, British Columbia Wood Specialties Group);

- strongly support the efforts of the recently formed Canadian Building Products Export Council (CBPEC) to develop and expand export markets for Canadian products throughout the world (DFAIT/missions, IC).

## References

More information is available on the sector from the Canadian Lumbermen's Association, the Canadian Manufactured Housing Association and the Canadian Building Products Export Council, all located in Ottawa; the B.C. Wood Specialties Group in Surrey, B.C.; and IC's Forest Industries Directorate in Ottawa.

## Contacts

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 Industry Canada  
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 Resource Processing Industries Branch  
 235 Queen Street  
 Ottawa K1A 0H5  
 Tel.: (613) 954-3037  
 Fax: (613) 941-8048

**NON-WOOD BUILDING PRODUCTS**  
 Industry Canada  
 Metals and Minerals Directorate  
 Resource Processing Industries Branch  
 235 Queen Street  
 Ottawa K1A 0H5  
 Tel.: (613) 954-3126  
 Fax: (613) 954-3079

Department of Foreign Affairs  
 and International Trade  
 Resources Division  
 125 Sussex Drive  
 Ottawa K1A 0G2  
 Tel.: (613) 996-4209  
 Fax: (613) 943-1103



## Construction Products

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Mission to Syria, Lebanon and Dubai	Apr-95	Damascus, Beirut, Dubai	DFAIT	613-944-6346
Saudi Build '95: Info Booth	Oct-95	Riyadh	DFAIT	613-944-5984
Saudi Buyers' Mission to BATIMAT '95	06-Nov-95	Paris	DFAIT	613-944-5984
<b>Asia-Pacific South</b>				
Sibex '95: Info Booth	17-May-95	Singapore	DFAIT	613-996-5824
Building and Construction Indonesia '95	Sep-95	Jakarta	DFAIT	613-992-0959
<b>Canada</b>				
Taiwan Timber Frame Manufacturers Materials Mission	Apr-95	Canada/Various	DFAIT	613-943-0897
Manufactured Housing Buyers' Mission from Japan	May-95	Cross-Canada	DFAIT	613-995-1678
Building Materials Mission - Fukuoka	Jun-95	B.C., Alberta	DFAIT	613-995-1678
Taiwan Building Materials Buyers' Mission	Sep-95	Canada/Various	DFAIT	613-943-0897
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Building Mission to Latvia, Estonia	Apr-95	Riga, Tallin	DFAIT	613-944-1437
Mission to Poland	02-May-95	Warsaw	DFAIT	613-996-7107
Construction/Building Products Mission	Sep-95	Zagreb, Croatia	DFAIT	613-996-7107
Construction Materials Mission	Oct-95	Bratislava	DFAIT	613-996-7107
<b>East Asia</b>				
Taiwan Timber-Frame Manufacturers' Mission	Apr-95	Canada/Various	DFAIT	613-943-0897
NUAA Building Materials Show: Info Booth	Jun-95	Taipei	DFAIT	613-943-0897
Ibex '95: Info Booth	Jun-95	Hong Kong	DFAIT	613-995-6962
Building Products Mission	Aug-95	Canada/Various	DFAIT	613-996-6987
Buyers' Mission to Canada from Hong Kong, South China	Sep-95	Montréal, Toronto	DFAIT	613-995-6962
Exploratory Trip re Potential Capital Projects	06-Sep-95	China	IC	613-954-2956
Japan Home Show: Ontario Mission	Oct-95	Tokyo	Ontario	416-325-6658
Shanghai Construction Show: Info Booth	07-Oct-95	Shanghai	DFAIT	613-996-6987
China Building '95: Info Booth	Nov-95	Beijing	DFAIT	613-996-6987
Industry Seminars	Nov-95	Shanghai	DFAIT	613-996-6987
Taipei Construction & Building Material Show	Dec-95	Taipei	DFAIT	613-943-0897
Building South China '95: Info Booth	Mar-96	Hong Kong	DFAIT	613-995-6962

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
<b>Japan</b>				
Canada Comfort Direct Program: Exhibit	TBD	Tokyo, Osaka, Kobe, Toyama	DFAIT	604-844-1952
Building Standards Harmonization: Mission	Apr-95	Tokyo	DFAIT	613-995-1678
Tokyo Good Living Show	18-Apr-95	Tokyo	B.C.	613-995-1678
Osaka Building Materials Show: Info Booth	May-95	Osaka	DFAIT	613-995-1678
Off-site Housing Development: Product Promotion	Jun-95	Tokyo	DFAIT	613-995-1678
Aichi Housing Fair: Info Booth	Sep-95	Nagoya	DFAIT	613-996-2458
Building Products Buyers from Japan	Oct-95	Vancouver, Saskatoon, Toronto	DFAIT	613-995-1678
Japan Home Show: Info Booth	Oct-95	Tokyo	DFAIT	613-995-1678
Prefabricated Housing Seminars	Oct-95	Japan/Various	DFAIT	613-995-1678
Regional Building Products Fairs: National Stand	Oct-95	Sapporo, Sendai	DFAIT	613-995-1678
Canadian Building Products Show	Oct-95	Nagoya	DFAIT	613-995-1678
Mission from Nagoya	Oct-95	B.C., Alberta	DFAIT	613-995-1678
Canadian Building Materials Show	Oct-95	Fukuoka	DFAIT	613-995-1678
Canadian Building Products Show & Seminar	Oct-95	Osaka	DFAIT	613-995-1678
Housing Mission from Osaka	Nov-95	Canada/Various	DFAIT	613-995-1678
NAHB Japanese Visitors: Canadian Company Visits	Jan-96	Vancouver Area	DFAIT	613-995-1678
Incoming Mission from Japan	Jan-96	Vancouver Region	DFAIT	613-995-1678
Panel Users' Mission from Japan	Feb-96	Vancouver, Calgary	DFAIT	613-995-1678
West Japan Total Living Show: Info Booth	Mar-96	Fukuoka	DFAIT	613-995-1678
<b>Latin America and the Caribbean</b>				
Expo Construction: Info Booth	May-95	Bogota	DFAIT	613-996-5548
Engineering and Architectural Services Mission	Jun-95	Kingston, Belize City	IC	613-943-8807
Building Materials and Systems: Fair	06-Jun-95	Mexico	DFAIT	613-995-0406
EXPO CAPAC	Sep-95	Panama	DFAIT	613-996-6129
CONSTRUEXPO: International Construction Trade Show	17-Nov-95	Guadalajara	IC	613-954-3126
<b>United States</b>				
Incoming Building Products Mission from Seattle	Apr-95	Alberta	DFAIT	613-944-7486
Portland Home Show: Mission from New Brunswick	Apr-95	Portland	N.B.	506-453-3984
Recycled Building Products Market Seminar	May-95	Los Angeles	DFAIT	213-346-2700
National Hardware Building Products Show: National Stand	Aug-95	Chicago	DFAIT	613-944-7486
Remodellers Show: National Stand	Oct-95	Atlanta	DFAIT	613-994-7486

Activity	Date	Location	Dept.	Contact
Incoming Mission from Atlanta to Vancouver Building Products Show	Dec-95	Vancouver	DFAIT	613-944-7486
Value Added Wood Products Market Study	Dec-95	Atlanta	DFAIT	613-944-7486
Mission from L.A. to Wood Building Products Industry	Dec-95	Western Canada	DFAIT	613-944-7486
Hardware Building Products Show: National Stand	Jan-96	Chicago	DFAIT	613-944-7486
Lumber & Building Products Show: Mission	Jan-96	Michigan	DFAIT	613-944-7486
NERLA: National Stand	Jan-96	Boston	N.B.	506-453-3984
NAHB Houston: National Stand	Jan-96	Houston	DFAIT	613-994-7486
Retail Lumberman's Show: NEBS Mission	Jan-96	Boston	DFAIT	613-944-7486
Mission to Canadian Hardware Show	Feb-96	Toronto	DFAIT	613-944-7486
Detroit Design & Construction Mission	Feb-96	Detroit	DFAIT	613-944-7486
Building Products: New Exporters' Mission	Mar-96	Seattle	IC	604-666-1443
Canadian Building Products Show	Mar-96	Seattle	DFAIT	613-944-7486
Market Study: Commercial Building Products	Mar-96	Buffalo	DFAIT	613-994-7486
Market Study: Value-Added Wood Products	Sep-96	Los Angeles	DFAIT	613-944-7486

### Western Europe and European Union

Interzum '95: Info Booth	May-95	Cologne	DFAIT	613-992-7001
Spanish Construction Co.: Incoming Mission	Jun-95	Montréal, Toronto, Maritimes	DFAIT	613-996-7544
Leipzig Construction Fair: Info Booth	Oct-95	Leipzig	DFAIT	613-996-3774
Interbuild '95: Ontario Exhibit	Nov-95	Birmingham	Ontario	416-325-6514
BATIMAT: National Stand	Nov-95	Paris	DFAIT	613-992-7001
Constamat: National Standards Trade Show: National Stand	Feb-96	Barcelona	DFAIT	613-996-7544
Seminars on Canadian Construction Techniques	Feb-96	Spain	DFAIT	613-996-7544
BATIBOUW: Info Booth	Mar-96	Brussels	DFAIT	613-992-7001









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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Apparel and Fur

The industry produces all types of apparel for men, women and children, including industrial and athletic wear.

### International Environment

Apparel production exists in virtually all countries. During the last 20 years it has become increasingly centred in countries with a plentiful labour supply and wages lower than those in industrialized countries. In 1992, 66 percent of world trade in apparel flowed from low-cost to industrialized countries.

Market penetration by low-cost producers has been concentrated in "commodity products" such as dress shirts, blouses, sweaters, pants and underwear that can be produced in long production runs. In 1992, the major importers of apparel were the European Union (EU), the United States and Japan (see Figure 1); Canada ranked seventh.

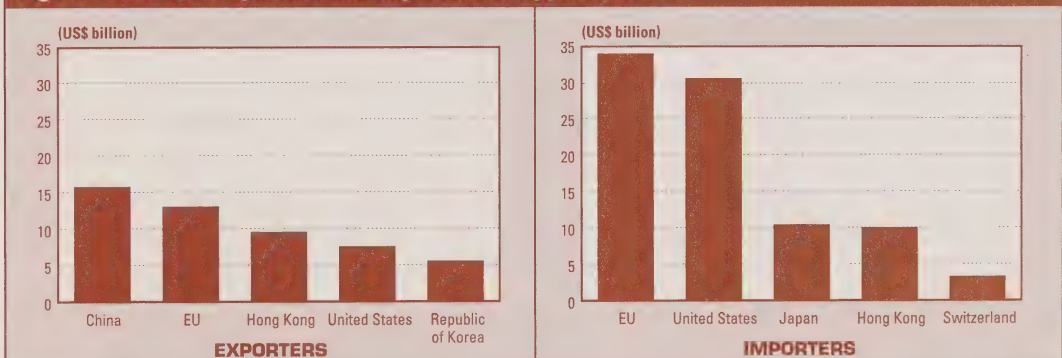
The Multi-Fibre Arrangement (MFA) under the General Agreement on Tariffs and Trade (GATT) enables importing countries to impose country-specific controls to restrict imports that cause large-scale disruption of home markets. As a result of the recently concluded Uruguay Round

of the GATT, this protective agreement will be gradually phased-out over a 10-year period, beginning in 1995.

To counter the impact of low-cost imports, to maintain their markets and to gain competitive advantage, producers in industrialized countries such as Canada have been adopting more effective and innovative marketing, product development and manufacturing strategies, including:

- adoption of modular manufacturing and CAD-CAM technologies to enhance flexibility;
- forging of closer relationships with suppliers and customers;
- development of quick response and better after-sale service through electronic data interchange technologies;
- development of more innovative products;
- more extensive development of brand and designer names.

Figure 1 — Major Exporters and Importers of Apparel, 1992



Source: GATT International Trade 91-92, Geneva, 1993

## Canadian Position

In 1993, total value of the Canadian apparel market was \$8.5 billion, based on wholesale prices, of which 72 percent, or \$6.1 billion, was produced by 1700 domestic enterprises. With a work force of 87 000, the industry is a major employer among Canadian manufacturing sectors. Employment is concentrated in Quebec and Ontario, which account for 85 percent of total apparel industry employment.

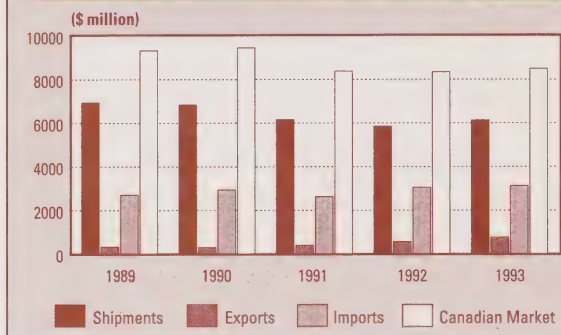
In the past 10 years, the formerly domestic-oriented, highly fragmented Canadian apparel industry has begun to evolve into one with a global outlook, modern manufacturing facilities and an increasingly high level of professional management. An element of this evolution has been the concentration of production among larger companies with the human and financial resources necessary to support international marketing.

While the trend toward greater concentration of production is occurring in all sectors, it is especially prevalent in the foundation garment, lingerie, women's fashion sportswear, dress shirt, men's fine clothing, men's pants, active wear and jean sectors.

The primary factor forcing change in the Canadian industry has been the displacement of domestic production by imports. As Figure 2 illustrates, the problem of shrinking market share was exacerbated by the fact that the market itself was shrinking.

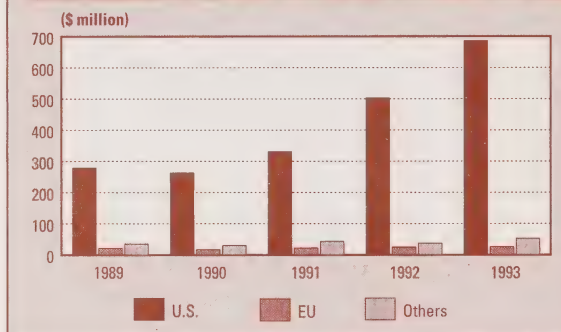
Historically, the vast majority of imports have originated from low-cost sources, which accounted for over 75 percent of total apparel imports to Canada in 1993. However, since the advent of the Canada-U.S. Free Trade Agreement (FTA) in 1989, imports from the United States have increased dramatically. The \$310-million increase in apparel imports from the United States since 1989 make that country the third-largest exporter of apparel to Canada, behind China and Hong Kong.

**Figure 2 — Shipments, Imports, Exports**



Source: Statistics Canada

**Figure 3 — Exports by Country of Destination**



Source: Statistics Canada

Between 1990 and 1993, retail apparel sales plummeted from \$9.5 billion to \$8.5 billion. In an effort to better control inventory and cut costs, surviving retailers have been compressing their supplier base.

While the FTA may have opened the door wider for the giant U.S. apparel producers, lower tariffs also provided new market opportunities for Canadian manufacturers. Many have taken advantage of those opportunities to drive up exports to the United States, from \$278 million in 1989 to \$686 million in 1993. Among industrialized countries, Canada ranks second only to Italy as

an exporter of apparel to the United States. These export sales have offset a large portion of the lost domestic market and, perhaps more importantly, have gained successful exporters a more diversified and stable client base.

While there has been some increase in export activity in other markets, concentration on the U.S. has limited the number of manufacturers taking advantage of profitable opportunities in European and Asia-Pacific markets. Nonetheless, Figures 2 and 3 show that the estimated 200 manufacturers that are selling abroad have increased exports from 4.8 percent of industry shipments in 1989 to 12.7 percent in 1993.

The depreciation of the Canadian dollar relative to other currencies should continue to assist exporters. Other contributing factors that will provide impetus for export growth are the industry's growing reputation for good quality, product diversity and creative design; Canada's image as a cold-weather country, which enhances its export prospects for outerwear, furs and quality wool garments; and the flexible production capabilities of Canadian manufacturers that enable them to respond quickly to market changes.

To expand exports, the industry will require:

- better long-term strategies for market development;
- better market information packages and their dissemination to interested companies;
- better educational packages for small- and medium-sized companies covering the "how-to" of exporting;
- better accessibility to export financing from organizations such as the Export Development Corporation (EDC).

The Canadian Apparel Federation (CAF), whose members represent 80 percent of Canada's apparel production and an even higher percentage of its exports, can be a driving force to accomplish these tasks.

While the industry exports a broad range of products, the major export items are trousers

(18 percent of total exports), men's and boys' suits (14 percent), swimwear (13 percent), furs (10 percent) and sweaters (9 percent). However, inroads are also being made in other product areas.

Over the years, the industry has tended to lag behind in the application of new technologies. As a result, it is estimated that there is a technology gap of five years relative to the United States and 10 years relative to Europe. Generally, only a small number of the larger manufacturers are actively engaged in expanding their technical knowledge and information base.

## Strategic Direction

The strategy will focus on helping small- and medium-sized companies to better access, prepare for, and exploit market opportunities in the United States and Mexico. In addition, efforts will be made to develop selected European and Asian markets. The overall aim is to expand both the number of exporters and the percentage of national production directed to exports.

The strategy will be pursued co-operatively by the CAF, the Department of Foreign Affairs and International Trade (DFAIT), and Industry Canada (IC).

CAF will:

- provide its members with opportunities to participate in co-operative marketing ventures in the United States;
- produce exporting seminars, a manual on the "how-to" of exporting, a directory of trade shows, and facilitate "rep" locator missions planned by DFAIT.

DFAIT will:

- expand the program of "rep" locator missions in the United States;
- encourage and promote attendance at major apparel shows with emphasis on Canada Mode in New York, Magic in Las Vegas and the North American Fur and Fashion Fair in Montréal.

IC will:

- work with DFAIT/missions to improve the strategic market intelligence they make available, in terms of frequency, depth and accuracy;
- in collaboration with DFAIT/missions, encourage the acquisition and adoption of new technology and production methods through visits to machinery exhibits, technical centres, and other manufacturing facilities; the setting up of technology databases; and the formation of a technical advisory committee.

## Contacts

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## Textiles

The highly diversified textile industry includes producers of man-made fibres, yarns, fabrics and a variety of textile products such as household linens, carpets and those used in the manufacturing of a broad range of industrial products. Not included in this definition is the motor vehicle fabric accessories industry, which had shipments of \$1.7 billion in 1993 and employed approximately 7000 people.

### International Environment

International trade in textiles represents about 4.4 percent of world exports in manufactured products overall. Between 1991 and 1992, the textiles trade grew by almost 7 percent, surpassing the average annual growth rate of 6.5 percent for the period 1980 to 1992. In 1992, world trade reached US\$117 billion, of which 22 percent occurred between developed countries and some 39 percent between developed and developing countries.

While developed countries continue to dominate the textile sector (see Table 1), developing countries, with easy access to new manufacturing technologies, are increasing their share of world textile production. In addition, emerging regional trade blocs and new trade powers such as China, which is currently undergoing a phenomenal expansion in textile manufacturing, will strongly influence global trade patterns and industry structure. It is noteworthy that China is increasing its relative importance as a world textile importer (average annual growth rate of 17 percent over the past 12 years), due to continuing domestic shortages of raw materials needed by its rapidly expanding clothing industry. In 1992, China was the fourth-largest importer of textiles in the world. Changing swiftly to become internationally competitive in a more dynamic trading environment, textile producers around the world are investing in productivity improvements, product and market specialization, and are establishing a regional presence in a growing number of selected markets.

Over the next decade, world textile consumption is projected to grow by only 1.5 percent annually. Much of this growth is expected to come

from maturing markets in developing countries that succeed in increasing their own purchasing power, rather than from mature markets in developed countries. Growth in demand for certain textiles will exceed the average rate. For example, many global competitors are attempting to capitalize on emerging opportunities for highly engineered technical textiles, for which demand is expected to grow by 10 to 15 percent annually.

**Table 1 — Key Players in World Textiles Market**

1992 - US\$ Billion			
Importer	Amount	Exporter*	Amount
Hong Kong <sup>(a)</sup>	13.1	Germany	13.9
Germany	10.2	Hong Kong <sup>(b)</sup>	11.0
U.S.	8.2	Italy	10.2
China	7.6	China <sup>(c)</sup>	8.6
France	7.5	South Korea	8.2
U.K.	6.9	Taiwan	7.6
Italy	5.6	Japan	7.1
Japan	4.2	Belgium-	
Netherlands	3.6	Luxembourg	6.5
Belgium-		France	6.3
Luxembourg	3.6	U.S.	5.9
Total-Top 10	70.5		85.3
% share in world exports/imports	59.9%		72.8%

(a) Imports less re-exports

(b) Includes domestic exports and re-exports

(c) Includes trade through processing zones

Source: GATT, 1993



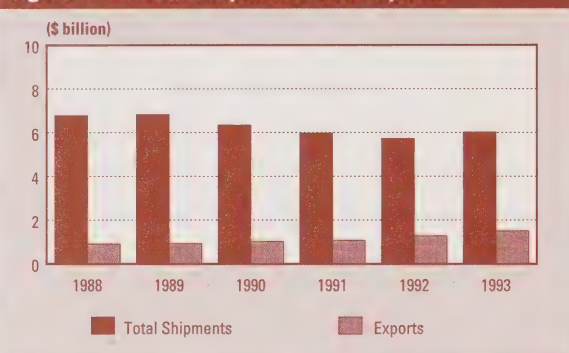
## Canadian Position

The textiles industry employed 45 000 people in 1993, and had total shipments of \$6 billion, \$1.5 billion of which was exported. The industry's exports have grown considerably, increasing their share of all shipments from 13 to 25 percent between 1988 and 1993. Exports continued to grow in the first six months of 1994, reaching \$904 million, which represents an increase of 27.2 percent in the value of exports over the same period in the previous year. The United States is the largest destination for textile exports, accounting for 75 percent in 1993 and 81 percent in the first half of 1994. Other key destinations include the European Union, Asia-Pacific countries and South America.

Substantial and continuing capital investment by the industry has produced a dynamic, modern, efficient and environmentally astute textile-manufacturing sector, with productivity improvements over the past decade outpacing those of Canadian manufacturing overall.

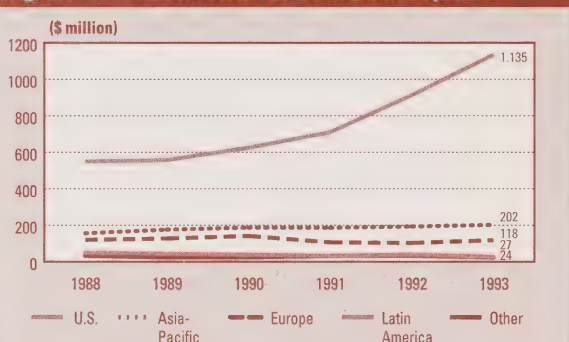
Boasting excellence in quality, design and service, Canadian firms are developing new export markets for an increasing variety of textiles. Some producers are very capital intensive, and can take advantage of economies of scale to attain price leadership in certain products with large world markets. Others are small- to medium-sized companies with competitive strengths in small-run production, derived from servicing the many diverse demands of a relatively small domestic market. Many are adopting and creatively adapting technological advances to develop new specialty yarns and fabric constructions, as well as unique higher value-added, high-performance textiles, which are in growing demand in specialized market niches worldwide.

**Figure 1 — Total Shipments and Exports**



Source: Statistics Canada, Industry Canada

**Figure 2 — Destinations of Canadian Exports**



**Some Breakdowns of Export Destinations (\$ million)**

	1988	1989	1990	1991	1992	1993
<b>Asia-Pacific (total)</b>	156	176	187	186	193	202
China	22	25	32	36	42	69
Hong Kong	12	20	19	17	38	23
Korea, South	35	39	38	40	20	17
Australia	35	41	30	30	31	36
<b>Latin America (total)</b>	51	44	39	33	40	27
Mexico	6	9	7	5	10	6
Argentina	0.6	0.4	0.3	3	6	3
Venezuela	16	9	7	4	4	2
Chile	2	2	2	2	3	2
Brazil	0.2	0.3	0.7	0.6	0.6	1
<b>Europe (total)</b>	120	127	141	106	103	118
Germany	7	8	17	17	22	38
U.K.	35	36	44	27	30	32
Belgium	27	31	28	19	13	12

Source: Statistics Canada, Industry Canada

## Strategic Direction

Slow growth in textile consumption and the liberalization of world trade are compelling the textile industry to strengthen its domestic base and aggressively pursue exports. To maximize opportunities for the textile industry, the Government will work closely with the industry and its associations, namely the Canadian Textiles Institute (CTI), the Canadian Carpet Institute (CCI) and the Textiles Human Resources Council (THRC), to encourage and promote the following initiatives and activities:

- provide the intelligence that will help manufacturers increase their sales in high-growth and niche markets; capitalize on opportunities arising from the North American Free Trade Agreement (NAFTA) and the integration of textiles into the General Agreement on Tariffs and Trade (GATT); and take advantage of opportunities in the Asia-Pacific region, Europe and South America (Industry Canada [IC], Department of Foreign Affairs and International Trade [DFAIT], CTI, CCI);
- enhance market intelligence gathering and dissemination activities. One example is a report on international market opportunities identified under Phase II of DFAIT's International Opportunities Canada (IOC) program. Another initiative, evolving from the Access North America program, is a study of market opportunities in Mexico for selected textile subsectors. Both will be prepared and distributed to industry (DFAIT/missions, IC, CTI, CCI);
- help small- and medium-sized manufacturers become export-ready and better prepared to compete in international markets. Central to the process will be government-led, industry-sponsored seminars and workshops that raise export awareness, highlight success stories, enhance skills, and cultivate new management and employee attitudes (IC, DFAIT, CTI, CCI, THRC);
- promote market-development activities and encourage the industry to participate in well-focussed trade shows and missions using available programs such as the DFAIT-sponsored Program for Export Market Development (PEMD) and New Exporters to Overseas Markets (NEXOS) (DFAIT, IC, CTI, CCI);
- enhance awareness of Canadian competitive strengths through various media, particularly in the North American market. Strengths include production flexibilities, product quality and quick response times. Canadian capabilities will be showcased in a series of product-specific export directories, which will be prepared and distributed to Canadian trade missions and prospective buyers worldwide under Phase I of DFAIT's IOC program (DFAIT, IC, CTI, CCI);
- explore and facilitate partnering and international strategic alliances between Canadian and foreign producers that would jointly conduct research and development, exploit results, and capitalize on innovations in product development and textile applications. As signatory to the Charter of Fundamental Principles of Global Trade for Textiles and Apparel (adopted by industry and labour representatives of some 24 countries), and member of the North American Textile Council, the CTI is well positioned to identify and promote viable networking opportunities (IC, DFAIT, CTI);
- improve the industry's understanding of standards and how they can facilitate access to foreign markets. Government will work closely with industry representatives to educate manufacturers on the importance of standards in international marketing. Industry will be encouraged to actively participate in the development of international standards, testing and certification (IC, DFAIT, CGSB, SCC, CTI, CCI, THRC).

## **Contacts**

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Fax: (613) 943-8820

## Footwear

The Canadian footwear industry manufactures a wide range of products from leather, rubber and other synthetic materials, with an emphasis on leather men's and women's boots and shoes, as well as winter and protective footwear.

### International Environment

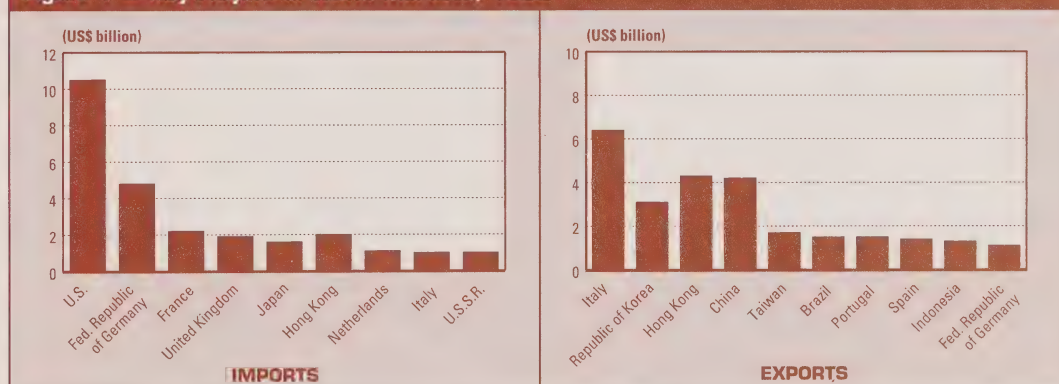
World trade in footwear totalled US\$34 billion in 1992, representing slightly more than 1 percent of total world exports in manufactured products. Developing countries accounted for 55 percent of all footwear exports.

The significant global shift of footwear manufacturing from developed to developing countries coincided with the general relaxation of international trade barriers and tariffs during the 1970s and 1980s. As is the case for most labour-intensive, basic-products manufacturing industries, conventional shoemaking is well suited to outward-looking economies with low labour costs, such as Asia. South Korea, Hong Kong, China and Taiwan, as a trade bloc, have become the world's dominant supplier of inexpensive footwear products to the European and North American markets (see Figure 1).

The footwear industry is undergoing significant restructuring in all developed countries. Producers have virtually conceded the cheaper end of both domestic and foreign markets to Asian and other low-cost suppliers. Considerable consolidation is taking place within the industry, together with the orientation of manufacturing facilities to the production of premium products specifically tailored to niches in world markets.

The development of new technologies spearheaded by footwear machinery manufacturers and co-operative research institutes such as the Shoe and Allied Trades Research Association (SATRA) is helping to reduce cost differences. Although this alone does not fully compensate for the much lower manufacturing wages in developing countries, improvements in design, quality and customer service are allowing manufacturers to compete in other specialized product areas.

Figure 1 — Key Players in World Markets, 1992



Source: Statistics Canada



## Canadian Position

The Canadian footwear industry comprises approximately 100 establishments with some 9000 employees. In 1993, the value of the apparent Canadian market (ACM) for footwear was \$1.4 billion (see Figure 2). Total industry shipments that year were about \$622 million, \$74 million of which were exported. Imports valued at \$892 million accounted for 62 percent of the ACM. The influx of low-cost imports from developing countries is largely responsible for the industry's loss of market share from 62 percent in 1985 to less than 40 percent in 1993.

On the positive side, the export share of total Canadian shipments almost doubled over the same period, from 6.6 percent to 12 percent. Canadian manufacturers were thus able to maintain production rates, despite a flat domestic market where imports are on the increase. The United States was the major destination for these exports, accounting for 88 percent in 1993, with other key markets including Japan and the European Union (see Figure 3).

Canadian firms that participate in major trade shows in the United States and Canada are developing a solid reputation in specific product areas, namely winter, utility and work boots. With products offering quality, style and good value, manufacturers are having some success in exploiting niche opportunities in international markets. A growing number of firms are investing in the most recent technologies (e.g. computer-aided design/computer-aided manufacturing [CAD/CAM] and just-in-time [JIT] systems), and in improving product lines and installing the management structures required to compete effectively in the U.S. and European markets.

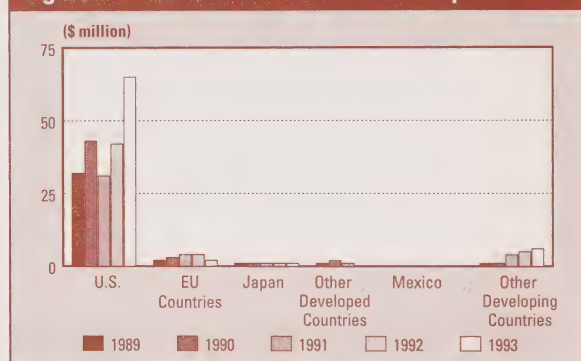
The firms, with few exceptions, are small- to medium-sized manufacturers, ideally suited to, service the diverse demands of the small domestic market. The flexible production systems that they have developed over the years serve them well in capitalizing on niche marketing opportunities in

**Figure 2 — Apparent Canadian Market (ACM)**



Source: Statistics Canada

**Figure 3 — Destinations of Canadian Exports**



Source: Statistics Canada

other countries. Export trade is essential to the future viability of this industry, as there is little room for growth in Canada.

To meet this challenge, firms will have to introduce modern management practices and be more receptive to adopting emerging new technologies and to encouraging employee participation in decision making. Currently, very few companies spend sufficient time networking with other manufacturers, attending major technical shows and seminars, or engaging in joint ventures of any significance.



## Strategic Direction

Strong import competition resulting from the liberalization of world trade is forcing the industry to solidify its position domestically, and to actively pursue export opportunities stemming from the Canada-U.S. Free Trade Agreement (FTA) and the North American Free Trade Agreement (NAFTA), as well as longer-term opportunities in the European and Asian markets.

To help the industry pursue these export opportunities, Industry Canada (IC), the Department of Foreign Affairs and International Trade (DFAIT), and the Shoe Manufacturers' Association of Canada (SMAC) will work closely on:

- promoting the adoption of new technologies to improve design, quality and productivity by encouraging membership in SATRA, a leading footwear research and product development centre. This will be accomplished mainly through seminars, publicity efforts and company visits (IC, SMAC);
- providing support for a mission to the GDS Shoe Fair in Düsseldorf, Germany, combined with visits to modern shoe factories to assess recent product/technology developments and to foster strategic alliances between major Canadian and European footwear manufacturers (IC, SMAC, DFAIT);
- improving export performance through participation in key U.S. trade shows in Las Vegas (DFAIT), industry/government-run seminars and workshops on export practices and opportunities (DFAIT, IC), and access to information on the footwear markets in the United States, Germany, the United Kingdom and Scandinavia (DFAIT, IC);
- developing a "benchmarking" project to compare the performance of Canadian corporate participants within their own industry and with their competitors in the United States.

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## Sporting Goods (including recreational watercraft)

The sporting goods industry includes firms primarily engaged in manufacturing a broad range of consumer goods for individual and group recreational and fitness activities.<sup>1</sup>

### International Environment

The world market for sporting goods is estimated at about \$70 billion, with recreational watercraft/marine accessories representing another \$20 billion. At the country level, there is a high degree of market concentration with the top 10 countries estimated to represent in excess of 80 percent of the world market and 75 percent of international trade. However, at the individual supplier level it is almost the reverse, with industry estimates indicating the top 10 companies control less than 20 percent of the market. Although exact worldwide market figures are unavailable, industry estimates place the U.S. at 30 percent of the sporting goods market, the European Union (EU) at about 33 percent, Japan at 22 percent, Canada at 3 percent, and the rest of the world at about 12 percent. In recreational watercraft, the U.S. accounts for about 50 percent of the market, EU 25 percent, Japan 10 percent and Canada 2 percent.

Worldwide, the sporting goods market relies heavily on trade, with about one third of the world market subject to international trade flows. In addition, there exists a high degree of country-specific product identification and manufacturing specialization. Generally, lower cost products are sourced from Far East low-wage countries, while developed countries (including Taiwan) provide the higher value-added items.

During the late 1980s there was a high degree of rationalization, and such well-known companies as Wilson, Nordica, Puma, Adidas, Head Prince, and Cooper changed ownership or were taken over. In the boating segment, Outboard Marine

Corporation, Brunswick, and Genmar undertook major restructuring programs.

Brand names continue to dominate the sale of medium- to high-end products. With the notable exception of Alpine ski manufacturing, suppliers tend to source products from countries or regions where the transaction will be to their benefit.

Despite moving some production facilities to China, Taiwan continues to be the leading exporter of sports equipment, accounting for almost 20 percent of world exports, while the United States dominates in recreational watercraft. Recent players emerging as significant exporters include China (particularly in bicycles) and low-wage areas in the Far East (e.g. Indonesia, Philippines, Thailand, Malaysia). In several cases, the emergence of these countries as exporters is the result of transferring existing production facilities from higher cost locations such as Taiwan, the Republic of South Korea and Hong Kong.

While technological and innovation development is widely dispersed, it is the country or region usually associated with a particular product that is often in the forefront of design and innovation. The sporting goods industry is second only to the defence/military sector in the use of composites and advanced materials. With many developed countries reducing spending on defence, companies engaged in the development and supply of advanced materials are looking more closely at this sector to expand its use of these materials. It is expected that the use of composites, already extensively adapted to racquet and golf equipment, will become more widespread throughout the industry.

<sup>1</sup> Excluded are firms primarily engaged in camping equipment, sporting arms and ammunition, sport tape, skate sharpening, athletic footwear and jerseys.

Several key emerging consumer trends in North America and Western Europe will influence the market, particularly:

- the continuing emphasis on personal fitness and family or group recreational activities, which is expected to sustain these activities' growth and popularity at the expense of competitive individual and team sports;
- increased female participation, helping to expand overall participation in many recreational and sporting activities and to popularize newer ones, resulting in increased demand for both new and existing equipment; and
- greater awareness by users of outdoor and recreational products of the effects these products and activities have on the ecology and environment. More manufacturers are now considering these issues in their product development and marketing plans.

Key emerging markets that will affect the industry in the next few years are the North American Free Trade Agreement (NAFTA), the developing economies of Eastern Europe and a more closely integrated EU. The potential effects of the General Agreement on Tariffs and Trade (GATT), which is to be implemented July 1, 1995, are difficult to assess, although they are not expected to result in any significant change in the industry.

Two new, potentially major competitors that have appeared on the global sporting goods scene are Russia and China. Canadian industry is encountering pressure from Russia's hockey stick production, while China has become a major supplier of bicycles to most developed economies, including Canada.

For the next decade:

- Internationally, all indications are that the outlook for sporting goods, including recreational watercraft, will be bright although sales may not achieve the 8 percent to 10 percent annual growth of the 1980s. The rise in many countries' income levels and an increasing interest in pursuing leisure activities, while

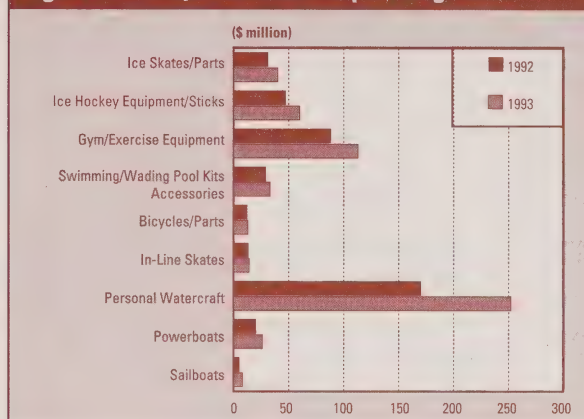
maintaining an active and healthy lifestyle, will reinforce this growth.

- Sourcing opportunities will expand as more countries become skilled in the use of composites and advanced materials. These will continue to supplant more traditional materials and gain acceptance among consumers.
- The more successful firms will be marketers, not just manufacturing operations, with control over the brand name, distribution, service, and manufactured quality of products.
- The industry will have to reduce product development time while there will be pressure from major retailers to shorten the product buying cycle.
- The industry will increase the use of recycled and recyclable materials in the manufacturing process and place greater emphasis on the development and marketing of environmentally friendly products.
- Significant growth is expected in individual outdoor-oriented activities and slower growth in team and indoor activities. Some segments targeted as growth areas over the next decade are products associated with cycling, soccer, exercise walking, basketball, in-line skating, volleyball, exercising with equipment, wilderness activities, and personal watercraft.

## Canadian Position

In 1993, the sporting goods industry comprised about 500 establishments and employed about 14 000 people. It has annual shipments of about \$1.2 billion (\$800 million in sporting goods and \$400 million in boats/marine accessories), of which \$656 million (56 percent) is exported. Imports are \$1.1 billion and account for 68 percent of the apparent Canadian market.

Many companies in the industry are Canadian-owned. They range in size and scope from relatively small operations serving niche markets and usually manufacturing a narrow brand of products,

**Figure 1 — Major Canadian Export Segments**

Source: Statistics Canada

to large, globally competitive companies with the resources and management to compete against well-known brand names. Canadian companies generally have a reputation for high-quality, well-engineered and well-designed products, and are strong international performers in certain segments of world markets.

While smaller Canadian companies have established a name and reputation in such diverse niche markets as sports whistles, above-ground pools, outdoor products and swim goggles, Canadian industry is known on a global basis more for its strength in the skating and hockey equipment, cycling, exercise equipment, and personal watercraft segments (see Figure 1). Canada's presence in these segments is dominated by large, sophisticated, internationally competitive manufacturers that have been in the forefront of opening new markets. In many cases, smaller companies have been able to take advantage of their efforts by exporting complementary and accessory products.

International trade is key to maintaining the industry's viability. In recent years, the export performance of firms in the industry has surpassed domestic growth and exports now represent

almost 56 percent of total shipments. In particular, there have been major export increases in ice skates and hockey equipment, personal watercraft, and exercise equipment.

In 1993, total exports increased by 36 percent over 1992. Geographically, the United States continues to be the dominant market, receiving about 85 percent of Canadian exports, followed by Western Europe with 8 percent and Asia (primarily Japan) with 3 percent.

Exports to the United States are expected to continue to grow significantly for the next several years, with the industry increasing its percentage of U.S. exports. This growth in exports to the United States is fuelled by the rising North American popularity of certain segments in which Canadian firms are major players, namely personal watercraft, in-line skates, exercise equipment and the complementary growth in products and accessories associated with the marine industry and roller and ball hockey. With leading manufacturers in all these categories, Canadian industry is taking advantage of this surge in popularity.

In Europe, it is expected that recent geopolitical changes will have a definite impact on the Canadian industry. The development of market economies in Eastern Europe is expected to create additional opportunities for skating and exercise equipment products, which are already popular in these countries.

Western Europe continues to be a significant market for the industry. Export increases have occurred in exercise equipment, ice skates, selected outdoor products (e.g. canoes), and splash/wading pools.

Major exporters are preparing for the closer economic integration of Europe in several ways. Some companies are establishing wholly owned marketing and production subsidiaries in the EU, while others are either aligning with community-wide wholesalers or developing licensing arrangements. Medium-sized and smaller companies with export potential are showing interest in identifying contacts to optimize opportunities that



will arise when the European economies are fully integrated. While the potential impact of the GATT is difficult to assess, the industry generally foresees increased possibilities in Europe and other developed areas, but has expressed concern about competition in this market from such Far East countries as Taiwan, the Republic of Korea, Malaysia, Thailand, China and the Philippines (see Figure 2).

With the recent implementation of the NAFTA, the Canadian industry has shown strong interest in identifying opportunities for sports and recreational products in the Mexican market. Several companies have already initiated contact, but there is a general consensus that more information and market intelligence on doing business in Mexico is required if the industry as a whole is to take full advantage of the market.

Canada is in a good position to take advantage of the growing popularity of in-line skating/hockey, personal watercraft, and outdoor activities. It should continue to maintain a dominant presence in the ice skating and hockey equipment sectors, with a lesser, though still competitive, position in cycling, exercise equipment, swimming pools and accessories, and recreational boats. In addition, Canada has established a good reputation as a quality supplier of specific niche products such as sports whistles, camping products, swim goggles, and high-end bicycle parts and accessories.

## Strategic Direction

To maximize opportunities for the sporting goods industry, the Government, in concert with the industry, will promote and encourage the following initiatives and activities:

- provide strategic market intelligence mainly in terms of industry statistics, and market and product trends to help manufacturers increase sales of goods with competitive advantages in high-growth and niche markets (IC, DFAIT/missions);

**Figure 2 — Exports by Geographical Region  
1992 vs 1993**



Source: Statistics Canada

- continue to focus on market development activities. Canadian missions to and exhibits at selective internationally recognized general sporting goods trade shows can expose Canadian products to a broad spectrum of international buyers. Examples of fairs are the National Sporting Goods Show in Chicago, ISPO in Germany, and the Montréal International Sports Exhibition (DFAIT/missions, associations, IC);
- provide market information and logistical and financial support to encourage companies to pursue opportunities in Japanese general sports and leisure shows and in European specialty and regional shows, such as Eurobike, SPOGA, METS, FIDEC, SISEL, MIAS (DFAIT/missions, IC);
- capitalize on opportunities arising from the NAFTA by:
  - continuing to assist and encourage companies to participate in niche and specialty shows in the U.S. in product segments where they can compete effectively, such as Outdoor Retailer, International Marine Trades Exhibition, National Spa and Pool Show, and Interbike;
  - developing more knowledge about the distribution characteristics and opportunities that exist in the Mexican market through

detailed market intelligence and participation in exploratory missions to major Mexican trade shows (DFAIT/missions, IC);

- assist small- and medium-sized firms to become export-ready and better prepared to compete in international markets through government- and association-led seminars, workshops, and missions. These will be focussed on raising export awareness, highlighting best practices, and cultivating new management attitudes (IC, DFAIT, associations);
- implement the INSIGHT pilot project for recreational boats, which consists of gathering, editing and organizing all published international and domestic information concerning the boating industry. It will be distributed on diskette to the industry, trade missions, and associations (IC, DFAIT/missions, associations);
- work with relevant associations to maintain awareness of their members' objectives and interests, and co-operate with associations to design marketing plans that can be implemented jointly by government and industry, or be recommended for implementation by the appropriate government department (associations, IC, DFAIT).

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## Tools, Hardware and Housewares

The Canadian hand tool, hardware and housewares industries manufacture a broad range of products such as cookware, cutlery, tableware, plastic housewares and other durables, locks and latch sets, cabinet and casket hardware fittings, hinges, and other builders' and shelving hardware as well as a variety of non-power-driven hand tools and implements such as augers, axes, chisels, edge tools, garden implements, hammers, handsaws, mechanics' measuring tools, screwdrivers and wrenches.

### International Environment

Significant changes in the global economy are affecting the market for Canadian-made hand tools, hardware and housewares products. Global consumer expenditures on these products have been stagnant during the past few years, resulting in significant pent-up demand particularly in the dominant U.S. market. As consumer confidence and the market for new homes improve, spending on household durables can be expected to increase. The aging baby boom generation is now reaching its highest level of personal disposable income. In addition, many hardware and home centre dealers are discovering growing demand for products that appeal to older shoppers. This demand is based on four factors: safety, convenience, ease of operation or manipulation, and security. Consequently, demand for many household consumer products such as lawn and garden equipment, cordless power tools, and small household appliances is increasing.

There are a number of areas where the international outlook for Canadian durables seems promising, including lawn and garden implements, tableware, plastic housewares, cookware, the do-it-yourself (DIY) market, composters and patio garden ornaments. Innovative and environment-related niche products such as composters also offer excellent opportunities for Canadian producers in international markets.

Currently, the U.S. accounts for over 90 percent of Canadian exports of these products, due in part to the Canada-U.S. Free Trade Agreement (FTA). It is expected that the North American Free Trade

Agreement (NAFTA) will help to open up the Mexican market to competitive Canadian products. Under the NAFTA, Mexican tariffs on household durables, currently in the range of 15 percent to 20 percent, would be phased out over 10 years. This is particularly significant as the Mexican market for household durables is expected to grow for some time as the country's standard of living rises. For many companies, Mexico is seen as a gateway to the Latin American market.

Although the European market has received some attention from Canadian exporters over the past few years, it is primarily the specialized niche markets that appear to offer the greatest potential for Canadian firms.

### Canadian Position

The demand for hardware products closely follows the level of activity in manufacturing and construction, (including residential and non-residential construction), and the home renovations market. The sustained recession, from which the Canadian economy now seems to be recovering, caused a sharp decline in demand for hardware and hand tools in recent years. Short-term prospects for a rebound in the manufacturing and construction industries are not promising, and economists predict that construction will be among the last business sectors to benefit from the general economic recovery.

In the interim, the current decline in residential housing starts has resulted in increased interest in renovations and upgrades of existing homes. This trend has translated into greater demand for

hand tools in the DIY market, and has more than offset the decline in demand by the manufacturing and construction industries.

Although small companies with less than 20 employees dominate the Canadian hand tool, hardware and housewares manufacturing base, they account for only a small fraction of the total value of shipments. The lion's share of domestic sales are made by a small number of large companies. Approximately 40 percent of these are subsidiaries of U.S.-based multinational corporations.

Total industry sales for 1992 were estimated at \$5 billion, with employment at approximately 24 000. The tool, hardware and housewares sectors have long recognized that viable export markets must be developed and expanded if they are to grow profitably and continue to be a strong employer in Canada.

The U.S. is both the principal destination of Canadian exports and the principal source of its imports. Low-cost Asian imports, however, especially from Taiwan, have shown strong growth in recent years. The steady growth in hardware imports from low-cost Asian producers reflects the much lower material and labour costs enjoyed by all developing countries. These cost advantages have forced small Canadian firms to specialize and carve out niches in which to market their products. What Canadian firms lack in cost advantages over their foreign counterparts, they are making up in quality and innovation.

## Strategic Direction

To maximize opportunities for the tools, hardware and housewares industries, government in co-operation with industry, will:

- continue to focus on the U.S. through niche marketing;

- increase the level of export activity through:
  - encouraging more companies to participate in key U.S. trade shows such as the Chicago Hardware/Building Products Show (Industry Canada [IC], Department of Foreign Affairs and International Trade [DFAIT]/missions);
  - incoming missions of buyers to visit Canadian trade shows and plants (DFAIT/missions, IC);
  - providing strategic market intelligence, particularly industry statistics and market and product trends (DFAIT/missions, IC);
  - encouraging firms to take advantage of new opportunities in Europe and Mexico by participating in major trade fairs in those regions through the Program for Export Market Development (PEMD) (IC, DFAIT/missions);
- enhance market intelligence gathering and dissemination, such as updating the *Directory of Canadian Exporters of Hardware and Housewares Products* (DFAIT).

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## Residential Furniture

The residential (also referred to as household) furniture industry includes firms that primarily manufacture wooden, upholstered, and other household furniture (made of metal, plastic and other material).

### International Environment

In 1993, the world market for all furniture products was estimated at over \$149 billion, with the five largest furniture importing countries being Germany, the United States, France, the Netherlands and the United Kingdom.

The residential furniture market is greatly dependent on regional and consumer preferences for style, design, size and quality.

The General Agreement on Tariffs and Trade (GATT) is not expected to dramatically alter existing trade patterns for residential furniture products. The U.S. will remain Canada's principal trading partner due to its geographical proximity and common characteristics of furniture product design, quality and standards. However, increased competition may be expected from Asian countries which, with modern technology, could produce all types of products, from low- to high-end categories.

The North American Free Trade Agreement (NAFTA), which was implemented on January 1, 1994, will phase out tariffs on furniture over the next 5 to 10 years between Canada, the United States and Mexico. Opportunities will exist mainly for Canadian producers of high-end specialty products that do not compete directly with Mexican low-cost products.

Taiwan is by far the largest source of U.S. and Canadian residential furniture imports. Other Asian countries, such as the Philippines, Malaysia and Indonesia, are developing efficient furniture manufacturing industries for the purpose of exporting. China, with its abundant, low-wage labour force, is also becoming more active on the international scene. These imports mean particularly strong competition in the metal furniture, wooden living-room and outdoor furniture areas.

Although the market for residential furniture in Japan has been stagnant over the past few years, a wide range of trade promotion activities should help to stimulate further growth in furniture exports in the near future. Osaka's new Asia and Pacific Trade Centre, which opened in the spring of 1994, should give foreign and Japanese manufacturers an opportunity to exhibit products and sell directly to Japanese retailers, thereby short-cutting the complex Japanese distribution system.

Furniture products imported from Europe tend to feature unique modern or contemporary designs in higher-priced ranges that appeal to smaller market segments. Many of these high-end products are shipped unassembled.

In the past, labour costs, access to raw materials, tariff rates and transportation fees were critical to the competitiveness of furniture products in the marketplace. In the future, comparative advantage will be based more upon marketing talent, integration and design. It will be more important than ever to deliver high-value products at the lowest possible cost.

### Canadian Position

In 1993, the Canadian residential furniture industry consisted of about 660 firms, with shipments worth \$1.6 billion, and employed some 19 000 people. A large part of the industry is located in Quebec and Ontario, with these provinces accounting for approximately 85 percent of employment and shipments. Shipments originating from Western Canada accounted for most of the remaining 15 percent.

Exports of Canadian residential furniture reached \$418 million in 1993, an increase of 42 percent over 1992. Exports accounted for

approximately 26 percent of Canadian residential furniture shipments, while 36 percent of the domestic market was supplied by imported furniture. The United States, by far Canada's largest export market, received about 95 percent of all residential furniture exports in 1993. It is also Canada's largest source of furniture imports, accounting for about 55 percent of total imports in 1993. Europe is the second-largest export destination for Canadian furniture products, followed by Japan.

The wooden furniture subsector accounted for close to 75 percent of all residential furniture exports in 1993. It was also the only subsector to register a positive trade balance (\$22.6 million in 1993).

Most Canadian residential furniture manufacturers are small- to medium-sized firms, many of which are Canadian-owned, and a few operate production facilities in the United States. Some have demonstrated the capacity to be competitive in continental and international markets, and some are niche players with a special talent for marketing unique products.

The residential furniture market is largely heterogeneous, with a wide variety of consumer preference for style, design, uniqueness, quality and price. All products are also characterized by categories of low-, medium- and high-priced furniture. Given the substantial tariff protection in the past, Canadian manufacturers were able to maintain a dominant position in the domestic market by producing a wide variety of designs and styles in all price ranges.

With the elimination of tariffs under the Canada-U.S. Free Trade Agreement (FTA), U.S. competition in the Canadian market has significantly increased. As it is becoming harder for Canadian manufacturers to maintain their share of the domestic market, they will have to increase their exports to foreign markets. Although the current exchange rate has favoured Canadian producers, they still need to improve their

productivity and competitiveness by:

- implementing more efficient manufacturing methods;
- focussing on product specialization;
- designing new products;
- developing new markets;
- improving marketing and promotion strategies;
- considering strategic alliances or joint ventures, both domestically and internationally.

Mexico's emergence as an important player in the North American market will increase the competition faced by the Canadian industry in domestic and main export markets. Low-end Mexican-made furniture will replace some low-end imports from the United States and Asia, and unique Mexican styles will also sell in Canada. Canadian manufacturers should investigate the possibility of penetrating the large Mexican market, mainly through quality, high-end furniture products (e.g. casegoods, upholstery) that would not be in competition with low-cost furniture.

Canadian exports to Japan rose from \$1.5 million to \$6.5 million between 1992 and 1993, mainly due to increased Japanese interest in North American products, the low value of the Canadian dollar, and the high cost of manufacturing in Japan. The Japanese market may also offer some opportunities for a number of Canadian specialty wooden furniture manufacturers. More is required to identify the export opportunities offered by this huge market. Differences in style, culture, language, distribution and marketing systems are factors that need to be studied in more depth. Canadian manufacturers will also need to adjust their design and sizing to make their products suitable for the Japanese and Asian markets.

Canadian manufacturers will have to become more competitive by pursuing the productivity gains available through new technologies and advanced manufacturing systems. The increased

use of these new technologies, together with more emphasis on developing export markets, will likely allow medium-sized firms to offer a narrower product line to a broader market base. Design, market research and promotion will be very important to success in international markets. The development of export-oriented management systems will also allow firms to make long-term financial and product-development commitments. Specialization (niche marketing) will be the key to survival for much of the Canadian residential furniture industry.

Selling price, customization, quality, design and quick delivery times will give Canadian producers the advantages they need to compete in the international marketplace.

Due to transportation costs, the popularity of ready-to-assemble furniture is expected to continue, and new products will be introduced to accommodate the rising demand for home office and home entertainment centre products. Recently, more attention has been given to designing products that satisfy the needs of the aging and disabled populations, while juvenile furniture and motion furniture are also experiencing greater popularity.

## Strategic Direction

To make the most of the opportunities for the residential furniture industry, government, in co-operation with the industry will:

- continue to focus efforts on the U.S. market;
- increase the level of export activity by:
  - encouraging more companies, particularly small- and medium-sized firms, to participate in key U.S. trade shows (e.g. High Point), and to take advantage of government assistance programs such as the Program for Export Market Development (PEMD) (Industry Canada [IC], Department of Foreign Affairs and International Trade [DFAIT]/missions);
  - organizing incoming missions of targeted dealers and buying groups to visit Canadian trade shows and plants (DFAIT/missions, IC);
  - providing strategic and up-to-date information on foreign markets, such as statistics, specific products in targeted geographic markets, dealers and buying groups, fairs, market trends (e.g. market study of residential furniture in Japan) and technology (IC, DFAIT/missions);
  - encouraging firms to take advantage of new opportunities in Mexico and the Asia-Pacific region by participating in major trade fairs in those regions (DFAIT, IC);
  - updating and preparing guides and directories on Canadian export capabilities for the furniture industry, under Phase I of DFAIT's International Opportunities Canada (IOC) program, for distribution to missions and the foreign buying community (DFAIT, IC);
  - updating and preparing Global Market Opportunity Reviews (GMORs), under Phase II of IOC, for distribution to Canadian companies;
- organizing seminars and workshops to better prepare Canadian exporters to enter new markets (DFAIT, IC, industry);
- increasing Canadian visibility abroad by helping the industry develop an effective marketing program, mainly for High Point (IC, associations);
- encouraging product design, productivity and quality improvement, using funding provided through such initiatives as IC's Furniture Sector Campaign (IC);
- increasing exporter compliance with foreign standards by monitoring relevant foreign government policies and initiatives, and participating in international forums to advocate the development of international standards, testing and certification, including ISO 9000 standards (IC, associations, technology centres).

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## Business and Institutional Furniture

The business and institutional furniture manufacturing industry consists of establishments engaged in the production of furniture made from metal, wood and other materials. Business furniture products include seating, desks, filing equipment, screens, home/office products and systems furniture. Institutional furniture products include public area, hotel, motel, library, health-care and hospital furniture. The consumers of these products are corporations, institutions, governments, professionals and, to a lesser extent, the residential sector.

### International Environment

In 1993, the world market for furniture of all types was estimated in excess of \$149 billion. Global trade in furniture represents about 3 percent of international exports in manufactured products. Although exact figures of the worldwide furniture market are unavailable, industry estimates place the United States and Canada at 26 percent and 3 percent respectively, the European countries at about 39 percent, Japan at 8 percent and the rest of the world at 24 percent.

Globally, the furniture market is dependent on trade flows heavily influenced by quality and regional design and styling requirements. Further, it is characterized by a high degree of country-specific product identification and manufacturing specialization.

Asian producers are competitive in North America in ready-to-assemble furniture in the low-to medium-price ranges, especially in the expanding desktop office equipment support furniture and systems furniture sectors.

European producers are competitive in the higher price ranges relative to niche markets both in Canada and the United States. These imports from Europe of seating and office systems usually feature unique design and technical innovations that tend to appear in domestic products for the North American marketplace some 6 to 12 months later.

The North American market has been and will continue to be the most important segment of global markets (with an estimated market share of some 40 percent) for business and institutional

furniture manufacturers. This success is due, in part, to the commonality of product standards and the common characteristics of product design.

Opportunities for business and institutional furniture exist in the new and emerging Mexican segment of the North American market. Mexican-produced furniture in the medium-term will replace some lower priced Canadian imports from the U.S. and Asia. Uniquely styled, high-end, wood executive furniture from Mexico has found, and will continue to find limited success in Canada and in international markets, taking into consideration that Mexico has had tariff-free access to the U.S. market for some time, with little success. Nevertheless, the industry should target and pursue opportunities in the large and expanding Mexican furniture market with products in all price ranges, as competitiveness is achieved more through design and quality and less through price. However, the cost of transporting products to markets favours the domestic producer.

The furniture industry's recent experience in opening the Japanese market demonstrated that some opportunities do exist, in the medium-term, for a very limited number of manufacturers of specialty furniture and high-end executive wood and systems furniture. Expansion in the longer term is dependent on the cost of commercial space, product design downsizing, transportation costs, evolving changes in the Japanese distribution system and commercial environmental culture.

Mainland China and other Southeast Asian countries have relatively unexploited markets for business and institutional furniture. In the short-to medium-term these markets are expected to



offer only limited export opportunities for producers of ready-to-assemble furniture because of the high cost of transportation, the lack of hard currency, the abundance of low-wage labour, access to raw materials and the coming on stream of Asian producers using European and North American state-of-the-art technology.

In many developing countries, international financial institution (IFI) expenditures play an important role in infrastructure development. Despite Canada's role as a leading donor to IFIs, Canadian manufacturers of institutional furniture have not taken full advantage of associated procurement opportunities. Total lending from these institutions exceeds US\$40 billion a year, a significant portion of which should be of interest to Canadian suppliers. IFI procurement activity can represent a major source of financing for penetration into developing markets and regions that can otherwise be difficult markets.

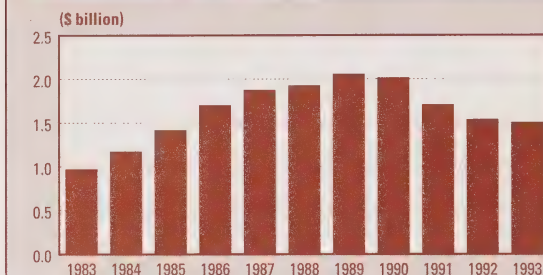
## Canadian Position

The Canada-U.S. Free Trade Agreement (FTA), which came into force on January 1, 1989, has been paralleled by reductions in construction starts for commercial, institutional and industrial building both in Canada and the United States. Canadian imports of furniture, especially from the United States, have shown a significant increase, and with the introduction of the North American Free Trade Agreement (NAFTA) on January 1, 1994, and the General Agreement on Tariffs and Trade (GATT) tariff cuts scheduled to begin on July 1, 1995, potential competitive pressures faced by Canadian manufacturers in their traditional markets are now expected to be greater than in the past few years. In the medium- to long-term, Asian countries such as Japan, Taiwan, the Republic of Korea and China are developing efficient furniture manufacturing sectors for export to global markets, and will add to this pressure. Asian imports represent some 10 percent of Canada's domestic market and provide strong

competition, especially in metal desks, wood tables and, to a lesser extent, in metal filing systems.

In this sector, demand is driven by the rate of vacancies in commercial, institutional and industrial buildings (which is high, but a lowering trend is anticipated in the next 12 months), changes in non-production employment, corporate profits, commercial construction, investments in office automation equipment, the home office phenomenon, and past postponements of replacement investments of business and institutional furniture.

**Figure 1 — Shipments**



Source: Statistics Canada

**Figure 2 — Exports and Imports**



Source: Statistics Canada

In 1993, the Canadian industry shipped products worth \$1.5 billion (see Figure 1) and provided employment for about 17 768 persons. The portion of Canadian shipments destined for export was 45 percent, while 37 percent of the Canadian market was supplied by imports (see Figure 2). The U.S. is by far Canada's largest export market, absorbing some 95 percent of Canadian business and institutional furniture exports. It is also the largest supplier of furniture imported into Canada, accounting for some 82 percent. Other main sources of imports are Europe and Asia. The business and institutional furniture sector is presently enjoying a positive trade balance of some \$201 million.

Canadian furniture manufacturing establishments are generally small- to medium-sized, with some 70 percent to 80 percent of shipments generated by the top 20 large firms (those employing over 100 production workers), and it is estimated that 90 percent of establishments are Canadian-owned. An increasing number of U.S. business and institutional furniture manufacturers have Canadian subsidiaries that supply both the domestic and export markets. A growing number of Canadian-owned firms have established production facilities in the United States.

Production facilities are concentrated in Ontario and Quebec, with these two provinces accounting for approximately 90 percent of total shipments. There is also a concentration of plants in Manitoba, Alberta and British Columbia.

Manufacturers of business and institutional furniture remain a dominant force in their domestic markets, and continue to achieve an increasing degree of success in the United States. This success is attributed to a number of factors, including the Canadian dollar in its current devalued state, a measure of cost-competitiveness with U.S. industry, flexible design specifications, high-quality products, and skilled exploitation of medium- and high-priced niche markets. However, on the negative side, the dramatic difference in the cost of shipping within the North American market favours the U.S. producer. Some firms

are exploiting offshore markets, but the industry has not actively pursued overseas opportunities because the U.S. still offers the greatest scope for further expansion.

Continuing changes in the dealer/customer base, especially in the United States, will have a significant impact on the ability of smaller manufacturers to compete. Companies such as Office Depot and many large manufacturers are either buying out dealers or becoming financially involved, and this is starting to take place in Canada.

Implementation of the FTA has increased competition in the Canadian market. This, along with competition from overseas producers, has required Canadian manufacturers to improve productivity and competitiveness through product specialization, development of new markets, the use of more efficient manufacturing methods and the undertaking of mergers and acquisitions. With the emergence of the NAFTA and the completion of the GATT negotiations, Canadian furniture manufacturers are now more exposed to international competition and will have to seriously review their marketing practices and strive to increase their share of the global market.

The global marketplace is a reality, and to take full advantage of the potential market opportunities, the industry must formulate new and innovative products and marketing strategies.

## Strategic Direction

Continuing slow growth in the business and institutional furniture sector and the challenge of global competition are compelling the industry to maximize their domestic market efforts and aggressively pursue exports. Government efforts will focus on providing the industry with intelligence that will help manufacturers increase exports. All export-ready manufacturers will be encouraged to capitalize on opportunities arising from the FTA, the NAFTA and the GATT. Manufacturers of furniture products with a competitive advantage in Asia-Pacific and European

markets will be assisted in the development of prospective long-term market opportunities.

Government, in co-operation with the business and institutional furniture industry, will work to take advantage of market opportunities on a global scale by:

- comprehensive consultations, initiated by the Department of Foreign Affairs and International Trade (DFAIT), in co-operation with Industry Canada (IC) and representatives of the industry, to identify the most appropriate export strategies for specific markets and to determine and set priorities for the industry's strategic trade intelligence requirements;
- targeted efforts by DFAIT, supported by IC, to overcome international barriers to the long-term trade competitiveness of the sector, e.g. "Buy America Act";
- the Canadian General Standards Board as the primary facilitator, supported by IC and in co-operation with industry, will concentrate on global product standards (ANSI/BIFMA) and quality assurance, including ISO 9000 standards;
- IC will assist in the Canadian Furniture Industry's efforts toward global product standards and quality assurance through its Furniture Sector Campaign Program;
- participation in global trade shows and missions. Industry requirements will be met using available programs such as the Program for Export Market Development (PEMD), sponsored by DFAIT;
- DFAIT (geographical bureaus and the Trade Commissioner Service), in co-operation with IC (industry sector branches), will encourage small, medium and large manufacturers to be ready for global market opportunities by providing specific market entry information. They will also provide reliable information on developing viable foreign market and investment opportunities;
- encouraging partnering and international strategic alliances between the industry and other sectors to conduct product design

research and development, exploit results, and capitalize on innovations in product design. Niche market development will be supported through available programs such as IC's Furniture Sector Campaign Program and DFAIT's Investment Prospecting and Technology Services;

- DFAIT and IC will improve mechanisms for supplier identification and development. They will also improve, as recommended by a federal interdepartmental task force, the dissemination to potential bidders of project information and intelligence regarding multilateral development bank (MDB) lending;
- DFAIT and IC will prepare and/or update Canadian furniture industry export capability guides under Phase I of DFAIT's International Opportunities Canada (IOC) program. The directories will be distributed to Canadian trade offices abroad and to the foreign buying community;
- DFAIT/missions and IC will prepare and/or update Global Market Opportunity Reviews (GMORs), under Phase II of IOC, for distribution to Canadian companies.

## Contacts

Industry Canada  
Furniture, Household and Recreational Products  
Directorate  
Consumer Goods Branch  
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Ottawa K1A 0H5  
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Department of Foreign Affairs  
and International Trade  
Sectoral Liaison Secretariat  
Trade Planning and Operations Bureau  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 996-7186  
Fax: (613) 943-8820

## Consumer Products

Activity	Date	Location	Dept.	Contact
<b>Canada</b>				
Incoming Buyers to SIDIM	25-May-95	Montréal	DFAIT	613-944-9479
SATRA Seminar	Jun-95	Canada	IC	613-954-2921
Incoming Buyers to Market Showplace '95	05-Aug-95	Calgary	DFAIT	613-944-9479
Furniture Seminars Phase II	Oct-95	Toronto, Montréal	DFAIT	613-944-9479
Incoming Buyers to IIDEX	16-Nov-95	Toronto	IC	613-954-3094
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
TIBCO '95 - Info Booth and Mission	Jun-95	Bucharest	DFAIT	613-992-1449
Consumer Goods '95 - National Stand	Jul-95	Kiev	DFAIT	613-944-1437
Security Systems Equipment Mission	Nov-95	Latvia and Estonia	DFAIT	613-944-1437
<b>East Asia</b>				
International Medical & Pharmaceutical Equipment & Technology - Info Booth	Jun-95	Shanghai	DFAIT	613-996-6987
<b>Japan</b>				
Tokyo International Gift Show - Info Booth	Apr-95	Tokyo	DFAIT	613-996-2460
Japan International Fur & Fashion Show - National Stand	Apr-95	Tokyo	DFAIT	613-996-2460
Sporting Goods Mission from Japan	24-Sep-95	Toronto, Vancouver, Montréal	IC	613-954-3109
Shanghai Construction Show - Info Booth	07-Oct-95	Shanghai	DFAIT	613-996-6987
JETRO's Leisure & Recreation Show - Info Booth	Mar-96	Tokyo	DFAIT	613-996-2460
<b>Latin America and the Caribbean</b>				
Canadian Fashion Promotion - Solo Show	Apr-95	Mexico	DFAIT	613-995-0460
Furniture Industry Market Profile	Apr-95	Mexico	DFAIT	613-995-0460
Sporting Goods Market Profile	Apr-95	Mexico	DFAIT	613-995-0460
North American Fur Fair - Mexican Visitors	06-May-95	Montréal	IC	613-954-2888
DEPORTEXPO - Info Booth	29-Jul-95	Guadalajara	IC	613-954-3109
Intefer - Info Booth	Oct-95	Guatemala City	DFAIT	613-996-6129
Fisa - National Stand	27-Oct-95	Santiago	DFAIT	613-996-4199
Catalogue Show - Zone Libre de Colón	Nov-95	Colón	DFAIT	613-996-6129
Havana International Fair - Info Booth	Nov-95	Havana	DFAIT	613-996-6129
Expocomer - National Stand	Mar-96	Panama City	DFAIT	613-996-6129

Note: Dates and locations are subject to change.



Activity	Date	Location	Dept.	Contact
<b>United States</b>				
Market Opportunities - U.S.	Apr-95	Canada	IC	613-954-2888
IMTEC - National Stand and NEBS	Apr-95	Chicago	DFAIT	613-944-5149
Miami International Boat Show - National Stand	Apr-95	Miami	DFAIT	613-944-5149
Incoming Buyers (Chicago) to Canadian International Boat Show	Apr-95	Toronto	DFAIT	613-944-5149
NSGA Show - National Stand and Mission	Apr-95	Chicago	DFAIT	613-944-5149
Outdoor Retailer, Reno - National Stand	Apr-95	Reno	DFAIT	613-944-5149
Interbike '95, Anaheim - National Stand	Apr-95	Anaheim	DFAIT	613-944-5149
Canadian Market Opportunities U.S. - Textiles	Apr-95	Various	IC	613-954-2890
Contract Canada Solo Show	17-May-95	Washington, D.C.	DFAIT	613-944-9479
NeoCon '95 - National Stand	12-Jun-95	Chicago	DFAIT	613-944-9479
New Exporters to Border States Mission - Giftware	Aug-95	Seattle	IC	604-666-1443
New Exporters to Border States Mission - Nursery Products	Aug-95	Portland	IC	604-666-1443
Canada Mode - Solo Show	Aug-95	New York	DFAIT	613-944-9476
Midwest Men's Wear	Aug-95	Chicago	DFAIT	613-944-9476
Canadian Fashion Group - Solo Show	Aug-95	New York	DFAIT	613-944-9476
Intimate Apparel - Solo Show	Aug-95	New York	DFAIT	613-944-9476
Technical Mission to U.S.	Sep-95	Atlanta	IC	613-954-2888
NEBS Mission - Apparel/Textiles	Sep-95	Plattsburgh	IC	514-283-5103
Canada Home Furnishing Market - Visitors	17-Nov-95	Toronto	DFAIT	613-944-9479
Apparel Rep. Locator Mission	Jan-96	Minneapolis	DFAIT	613-944-9476
Apparel Rep. Locator Mission	Jan-96	Dallas	DFAIT	613-944-9476
Apparel Rep. Locator Mission	Jan-96	Buffalo	DFAIT	613-944-9476
Western Shoe Show - National Stand	Feb-96	Las Vegas	DFAIT	613-944-9476
Canadian Sporting Goods Show - Visitors from U.S.	TBD	Montréal	DFAIT	613-944-5149
Canada Mode - Solo Show	Feb-96	New York	DFAIT	613-944-9476
Midwest Men's Wear	Feb-96	Chicago	DFAIT	613-944-9476
Apparel Rep. Locator Mission	Feb-96	Boston	DFAIT	613-944-9476
Apparel Rep. Locator Mission	Feb-96	Los Angeles	DFAIT	613-944-9476
Canadian Retail Hardware Show - U.S. Visitors	05-Feb-96	Toronto	DFAIT	613-944-7486
Health-care Design Forum - National Stand	Mar-96	Minneapolis	DFAIT	613-944-9479



Activity	Date	Location	Dept.	Contact
<b>Western Europe</b>				
National Ready-to-Wear Show	Apr-95	Toronto	DFAIT	613-996-2147
North American Fur and Fashion Fair - European Visitors	03-May-95	Montréal	DFAIT	613-996-7544
GDS Shoe Fair	01-Sep-95	Dusseldorf	IC	613-954-2921
Canadian Hardware Show - Visitors from Austria	TBD	Toronto	DFAIT	613-992-7001
Montréal International Sports Exhibition - European Visitors	Feb-96	Montréal	IC	613-954-3109







## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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***An Integrated Plan for Trade, Investment  
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**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

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1. Advanced Manufacturing Technologies
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3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries

15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
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*Aussi disponible en français sous le titre Les arts et Industries culturelles.*



## Cultural Industries

The performing arts involve creative pursuits in music, dance, theatre, literature and other cultural enterprises. Cultural industries consist of film/video, broadcasting, heritage, visual arts, sound recording and publishing. Arts and cultural industries generate products and services that should be promoted in the international marketplace.

### International Environment

Arts and cultural industries are important to national economies, generating worldwide business opportunities worth approximately \$200 billion annually. These earnings are expected to grow at an annual rate of 5 percent to 10 percent. The Canadian market is considerable at \$6 billion a year, but is marked by a high percentage of sales of foreign products and services.

Underlying the rapid evolution of these markets is the technological and commercial convergence of broadcasting, communications and computing into the emerging multimedia sector. This convergence entails a global realignment of the industries in question, which will have a direct impact both on industry structures and on access to cultural products, providing the consumer with access to anything, anywhere, anytime. This is already presenting substantial trade and regulatory challenges to Canada but, at the same time, is bringing new international export opportunities.

### Canadian Position

A key priority for Canada's cultural industries remains access to a secure domestic market. The results of the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT) negotiations of new international trade rules have provided satisfactory conditions for the domestic industry. The Government has retained the right to maintain or introduce measures to help support Canadian cultural industries in the face of competition from U.S.-based mega-industries.

However, the small size of the Canadian market, which is further divided into English-

and French-language markets, means that growth depends on gaining acceptance in foreign markets, in the face of intense competition. Governments can help lay the groundwork for access to foreign markets. Canada's participation in multilateral organizations, such as the Council of Europe, facilitates relationships between Canadian and foreign experts, thereby creating new opportunities for partnership between Canadian and foreign producers of cultural products.

Our bilateral film and television co-production agreements with 26 countries, most recently Japan, Chile and Sweden, along with other agreements, foster co-operative production and marketing in the audiovisual and other cultural sectors. Such agreements have been essential in enabling Canadian firms to amortize their costs over larger markets, as well as in promoting Canadian artistic and cultural excellence among international audiences.

International trade fairs, markets and festivals, which bring professionals from around the world to a single event, including some held in Canada, can be significant marketing tools. Related symposiums and background studies on marketing opportunities, often funded by the Department of Foreign Affairs and International Trade (DFAIT), are frequently organized alongside such events. These have proven especially useful in introducing smaller industry players to the potential of selling abroad.

The Government also provides support for international touring, promotion and marketing to the cultural industries through several agencies and programs. At the federal level, the Canada Council, Telefilm Canada, the Association for the Export of Canadian Books (AECB) and the Sound Recording Development Program (SRDP) are

involved in international cultural promotion and marketing activities. Various provincial agencies are also involved in similar efforts.

### **The Arts**

The development and growth of performing arts organizations in theatre, opera, music and dance during the past 30 years are important indicators of cultural and economic achievement in Canada. The sector employs highly trained workers with professional levels of education. This work force also serves as a talent pool for the broadcasting, film, publishing and sound-recording industries.

The arts sector in Canada has undertaken major operational restructuring and seeks long-term growth through more effective marketing. Despite financial difficulties, Canada has a vibrant domestic arts sector that is developing its dynamism on an ongoing basis through successful visits abroad of large and small arts organizations. The sector is also successful in attracting foreign tourist dollars. Its major strengths are the high quality of the talent and expertise of its work force, and an extensive domestic infrastructure of presenting facilities across the country. Dissemination of arts programming by electronic media, conventional television, as well as by new technologies such as high-definition television (HDTV), are potential strengths to be fully realized.

A comprehensive arts audience profile compiled from a 1992 survey indicates that arts companies would benefit from developing long-term and reliable domestic marketing strategies. Weaknesses in Canada's arts sector include below-average incomes for professional artists, especially those who are self-employed; recurring operating deficits; and the increasing costs of production. Among its numerous challenges is the growing competition for leisure time.

### **Cultural Industries**

The revenues from the export of cultural products are significant, and were estimated at more than \$500 million in 1992-93. Although this sector's

success has relied heavily on the development of a strong domestic market, future growth increasingly depends on the ability of its members to more fully exploit international market opportunities and to cope with new technologies. Canadian artists' exposure to foreign audiences and markets is recognized as an important element in the development of Canada's international competitive position. For example, to date Canada has signed film and television co-production agreements with 26 countries, to help gain access to international markets for Canadian feature films and television programs.

#### *Broadcasting*

Broadcasting is the major vehicle for the exchange of cultural expression among Canadians, and is a key industry in terms of its economic contribution to the overall sector. It includes both public and private radio and television stations and networks, cable television operators, and pay and specialty television services. In 1993, the overall industry generated commercial revenue of more than \$5 billion, in addition to the more than \$1 billion received by the Canadian Broadcasting Corporation (CBC) in appropriations from the Government. The industry employed over 37 000 people, and 95 percent of Canadian households had access to cable television services.

Current federal legislation, policies and regulations aim at encouraging domestic program production and ensuring the continued presence of Canadian programming on television, as well as Canadian music on radio. These measures have proven to be highly effective in creating an environment that is favourable to Canadian independent television production (which has more than doubled since 1989) and to the Canadian sound-recording industry.

#### *Film and Television Production and Distribution*

The Canadian production industry is characterized by a large number of relatively small companies, with a total of 667 establishments reporting



production revenues of \$697 million in 1992-93. The industry has shown many signs of maturity over the past few years. In 1991-92, 51 percent of the total production revenues were earned by 29 production firms, with revenues in excess of \$5 million per year. Furthermore, five large Canadian film companies have issued public shares since 1993, and export revenues from Canadian film and video products reached \$132 million in 1992-93 (up from \$37 million in 1986-87).

Canadian film and television locations and technical and production facilities are also an important source of activity in the Canadian industry and are rapidly gaining market share from their well-established U.S. competitors. Canada has many significant advantages that make it appealing to foreign producers such as the favourable exchange rate for the Canadian dollar, low wages, many diverse geographical locations, good infrastructure, quality services and qualified workers.

In 1992-93, some 160 companies, with total revenues of \$309 million were involved in the laboratory and post-production service sector. Many of these firms have developed great expertise in this high-technology area, and are able to offer their services to foreign firms shooting in Canada.

In the distribution sector, revenues reached \$1.2 billion in 1992-93. While the distribution of feature films remains largely controlled by a few U.S.-owned companies that earn approximately 88 percent of theatrical distribution revenues in Canada, Canadian firms have performed well in the non-theatrical and home-entertainment (home video and television) markets. Recent success of Canadian firms negotiating distribution rights with foreign firms demonstrates the progress made in improving their position as distributors.

#### *Sound Recording*

The sound-recording industry in Canada employs close to 17 000 people and generated revenues of \$834 million in 1992-93. Canada is the world's

second-largest producer of French-language sound recordings, next to France, and the third-largest producer of English-language recordings after the United States and the United Kingdom. Six multinational corporations control 88 percent of the market in Canada. In fiscal year 1992-93, approximately 215 small Canadian companies accounted for the remaining 12 percent. These Canadian companies nonetheless produced 75 percent of Canadian-content recordings in 1992-93 and Canadian artists are achieving renown, on both the domestic and international scenes.

The Canadian Radio-television Commission (CRTC)'s Canadian-content and French-language content requirements for music played on Canadian radio have been very effective in increasing Canadians' access to Canadian-content products, and their success at home has, in turn, enhanced their sales abroad. With the financial assistance provided to the industry under the Department of Canadian Heritage's SRDP, Canadian-controlled companies have increased their production of Canadian-content recordings as well as increased the quality of the productions.

In order to increase the industry's exposure on the international scene as well as the revenues flowing back to Canada from export sales of Canadian-content products, the Canadian sound-recording industry must now concentrate on the marketing of Canadian products both at home and abroad. Industry revenues flowing into Canada from abroad currently account for some \$100 million annually. Considering that promotion is often neglected by Canadian-controlled companies and the SRDP offers no incentive in this regard, potential export revenues are no doubt much greater.

#### *Publishing*

Book publishing generated \$1.6 billion in revenues in Canada in 1992-93. Export sales accounted for \$274 million and 18 percent of the total revenues, an increase of 31 percent over 1987-88, and were

realized almost exclusively by Canadian-controlled companies, which represent 98 percent of this market.

Canada recognizes that the importance of publishing goes beyond its direct economic benefits and has enacted legislation aimed at ensuring this sector's viability. In 1992, a new Book Publishing Industrial Development Program (BPIDP) was introduced for firms that are 75 percent Canadian-owned. The BPIDP includes an international marketing component designed to encourage the distribution and promotion of Canadian books abroad. The component is administered by the AECB, which also provides advice to publishers on export strategies adapted to their needs and market information and intelligence on various foreign territories.

Although the Canadian periodical market is valued at \$1.5 billion annually, periodicals are not a significant export item at this time. In fact, export sales represented only \$100 000 or 4 percent of total revenues in 1991-92, while imports accounted for 45 percent of sales in Canada during that same period.

## Strategic Direction

- The Canadian government is committed to the support of arts and cultural industries with respect to the production, marketing, distribution and exhibition of their products and services. The Government also recognizes that the export of Canadian cultural products and services to foreign markets is becoming an increasingly crucial source of revenue for these industries, and is committed to extending support for such exports.
- Working with DFAIT, the Department of Canadian Heritage is exploring ways to use existing international cultural programs more effectively, including those of the cultural agencies, to promote the marketing of Canadian goods, services and expertise.
- The Canadian government is also examining how it can provide improved international marketing support to Canada's cultural industries. Such support would include researching and identifying market niches and emerging opportunities abroad, and developing the Government's international cultural marketing policies and strategies to integrate and complement the diverse activities carried out by different government departments and agencies.
- The role of our cultural centres abroad, such as the Centre Culturel in Paris, has been reviewed by Canadian Heritage, DFAIT and the cultural agencies, and steps are being taken to ensure their effectiveness in promoting Canada's image abroad and in marketing our cultural products.
- A Cultural Industries Sector Expert Group (SEG) is being created at DFAIT to act as a central knowledge base for the cultural sector and to provide a network for the distribution of timely market intelligence and information from DFAIT missions.
- A training program is being developed through the Canadian Foreign Service Institute (CFSI) to enhance the abilities of foreign service officers and trade commissioners to promote Canada's cultural industries abroad. The program, which will include training for heads of missions, will invite keynote speakers from the cultural industries, and will provide handbooks, videos and other printed and electronic material.
- Industry Canada has broadened its efforts in the services sector in general, and in the entertainment industries in particular. The department's objective is to promote the global competitiveness of these industries and improve their contribution to the value chains of other sectors. Its strategy is to work in partnership with the private sector and other federal and provincial governments and agencies to develop and implement activities that will ensure that Canadian firms are able to tackle new international economic challenges.

## Contacts

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Business Services Industries Branch  
235 Queen Street, 7th Floor  
Ottawa K1A 0H5  
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Fax: (613) 941-8464

## Cultural Industries

Activity	Date	Location	Dept.	Contact
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Canadian Film Week	TBD	Moscow	Heritage	819-997-2784
<b>East Asia</b>				
Participation in the International Music Market Conference	Jun-95	Singapore	Heritage	819-997-2784
Participation in MIP-ASIA Audiovisual Market	Oct-95	Hong Kong	Heritage	514-283-6363
<b>Latin America and the Caribbean</b>				
Producers and Distributors Audiovisual Mission	TBD	Chile, Argentina, Venezuela	Heritage	819-997-2784
Guadalajara Book Fair	Nov-95	Guadalajara	DFAIT	613-995-0460
<b>Multiple Markets</b>				
Producers and Distributors Audiovisual Mission	TBD	China	Heritage	819-997-2784
Seminar: Sound Recording Opportunities in Europe/S. Africa	Mar-95	Toronto	Heritage	819-997-2784
Montréal Film Festival: Trade Development Seminars	Aug-95	Montréal	Heritage	819-997-2784
Toronto Film Festival: Trade Development Seminars	Sep-95	Toronto	Heritage	819-997-2784
Vancouver Film Festival: Trade Development Seminars	Oct-95	Vancouver	Heritage	819-997-2784
MIDEM: Trade Development Seminars	Jan-96	Cannes	Heritage	819-997-2784
<b>United States</b>				
Incoming Missions of TV and Film Producers	TBD	Sask., N.S.	DFAIT	613-944-6577
Regional Book Shows in Conjunction with the AECB	TBD	U.S./Various	DFAIT	613-944-6577
WAAA Presenters' Mission from San Francisco	TBD	Canada/Various	DFAIT	613-944-6577
American Book Association: National Stand	06-Jun-95	Chicago	DFAIT	613-944-6577
NEBS Mission of the Performing Arts Industry	Aug-95	Boston	DFAIT	613-944-6577
Atlantic Canada Showcase: Mission from Boston	Sep-95	Halifax	DFAIT	613-944-6577
Toronto Film Festival: Incoming Mission	Sep-95	Toronto	DFAIT	613-944-6577
Quebec Showcase: Mission from Boston	Sep-95	Montréal	DFAIT	613-944-6577
Galleries Directors Mission from New York	Oct-95	Toronto, Montréal	DFAIT	613-944-6577
Salon du livre: Export Development Seminar	Nov-95	Montréal	DFAIT	613-944-6577
Sundance Film Festival	Jan-96	Park City	DFAIT	613-944-6577
Location '96	Feb-96	Los Angeles	DFAIT	613-944-6577
Export Development Seminar for the Canadian Music Industry	Mar-96	New York	DFAIT	613-944-6577
<b>Western Europe</b>				
Guide to the French Recording Market: Publication	TBD	France	Heritage	819-997-2784

Note: Dates and locations are subject to change.







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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

*1995/96*

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

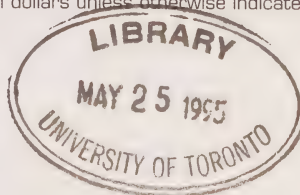
- |   |   |
|---|---|
| <p>Overview</p> <ol style="list-style-type: none"><li>1. Advanced Manufacturing Technologies</li><li>2. Agriculture and Food Products</li><li>3. Aircraft and Parts</li><li>4. Automotive</li><li>5. Biotechnologies</li><li>6. Business, Professional and Educational Services</li><li>7. Chemicals, Plastics and Advanced Materials</li><li>8. Construction Products</li><li>9. Consumer Products<ul style="list-style-type: none"><li>■ Apparel and Fur</li><li>■ Textiles</li><li>■ Footwear</li><li>■ Sporting Goods (including recreational watercraft)</li><li>■ Tools, Hardware and Housewares</li><li>■ Residential Furniture</li><li>■ Business and Institutional Furniture</li></ul></li><li>10. Cultural Industries</li><li>11. Defence Products</li><li>12. Environmental Equipment and Services</li><li>13. Fish and Sea Products</li><li>14. Forest Industries</li></ol> | <ol style="list-style-type: none"><li>15. Information Technologies and Telecommunications<ul style="list-style-type: none"><li>■ Sector Overview</li><li>■ Computers and Peripheral Equipment</li><li>■ Electronic Components</li><li>■ Geomatics</li><li>■ Instrumentation</li><li>■ Software Products and Computer Services</li><li>■ Telecommunications</li></ul></li><li>16. Medical and Health-Care Products and Services<ul style="list-style-type: none"><li>■ Medical Devices</li><li>■ Pharmaceuticals</li><li>■ Health-Care Services</li></ul></li><li>17. Minerals and Metals</li><li>18. Oil and Gas Products and Energy Equipment</li><li>19. Power Equipment</li><li>20. Primary/Secondary Industrial Machinery<ul style="list-style-type: none"><li>■ Mining, Forestry, Pulp and Paper</li><li>■ Agricultural Technology, Machinery and Equipment</li><li>■ Ocean and Marine Shipboard Technology</li></ul></li><li>21. Rail and Bus Equipment</li><li>22. Space</li><li>23. Tourism</li></ol> |
|---|---|

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Defence Products

The defence products industry sector is divided into three main areas: Aviation, Marine and Land.

### Defence-related Products for Aviation Markets

- avionics products such as cockpit displays and flight controls;
- aircraft mission products such as radar and surveillance systems;
- air traffic control (ATC) systems such as oceanic systems and airport systems;
- airport equipment such as lighting systems and microwave landing systems;
- aircraft simulators and computer-assisted trainers;
- software products for airborne computers and ATC systems;
- helicopter cable-handling systems.

### Defence-related Products for Marine Markets

- maritime navigation and communications products such as GPS & Loran C receivers, and aircraft to satellite communications systems;
- naval sensors such as sonars, radars and acoustic systems;
- vessel traffic management systems and harbour control systems;
- security systems for perimeter intrusion protection and shipboard security;
- shipboard machinery controls and communications systems;
- shipboard fire control systems and combat systems;
- ship components;
- replenishment-at-sea systems;
- ships (patrol frigates and MCDVs);
- water purification treatment systems.

### Defence-related Products for Land-based Systems

- security systems such as surveillance and protection products;
- military trucks, utility and light armoured vehicles and components;
- communications systems such as HF/RF radios and emergency locators;
- land-based sensors such as radars and infra-red (IR) systems;
- detectors for radioactive substances, X-rays, explosives, narcotics, etc;
- robotics systems for chemical and nuclear waste handling, medical and chemical processing plants and bomb disposal;
- simulators and trainers for nuclear plants and hydro generators;
- software products for land-based computers in unstable environments;
- displays for vehicles and C4I centres;
- alternative power sources and special batteries;
- small arms, propellants and ammunition;
- waste treatment systems for nuclear, biological and chemical waste;
- precision optics such as fibre-optics instruments and special lenses;
- advanced materials such as composites and ceramics.

## International Environment

The international environment continues to experience rapid change characterized by a trend toward mergers, alliances and consortia by many large defence firms. Government fiscal restraints and declining defence budgets are a reality in most

Western economies, resulting in policies for the development and acquisition of new systems and weapons. Declining global defence spending and significant cuts in procurement have also had a major impact on industrialized nations.

While expensive programs are being scaled down or terminated, a growing recognition that lighter modern conventional forces are required for national and international security commitments exists. Today's defence industry is characterized by high technology products incorporating sophisticated hardware and software. Defence procurement worldwide is shifting from specialized defence-only products to dual-use ones, including commercial off-the-shelf products. Markets that represent the most promising areas for the global defence market's future growth include life-extension and improvement programs, repair and overhaul (R&O) and spare parts for existing equipment, environmental technology, the acquisition of equipment for new light, rapid-response peacekeeping forces.

Key defence markets are shifting from North Atlantic Treaty Organization (NATO) countries to the Asia-Pacific region and the Middle East countries. The United States is by far the largest defence market in the world. However, sales to the U.S. are declining due to budget constraints, legislative barriers and increased domestic competition. The domestic situation has forced U.S. companies to compete more vigorously in the international market, supported by government. Consequently, the U.S. has increased its share of the international defence market over the past four years.

Governments in North America and Europe continue to encourage economic diversification of defence industries from traditional military production to alternative dual-use production. Dual-use products and technologies meeting defence requirements continue to offer "downstream promise," particularly in the fields of simulation and training, robotics, environmental technologies and security products.

Characteristics of the international environment are:

- rapidly advancing technologies and strong competition;
- declining defence spending (NATO countries);
- emerging markets for traditional weapons systems in Middle East and Pacific Rim markets;
- the overall market for defence electronics is increasing due to rising electronic content in new military hardware;
- increased emphasis on the development of dual-use technologies;
- an increase in market access problems as domestic governments attempt to reserve procurement for domestic suppliers;
- more open and competitive access to most marine, avionics, simulator and air traffic control markets from new trade agreements;
- extremely difficult access to European markets;
- teaming arrangements with domestic partners are essential for penetrating foreign markets;
- civil markets in aviation and marine systems are still suffering from the recession, although simulation and training device markets continue to grow;
- a growing air traffic control market resulting from greater access in Eastern Europe and Asia and the need to update old equipment to meet modern standards.

There will continue to be opportunities for companies involved in the following areas:

- unique defence products meeting niche market needs;
- maintenance and upgrades that enhance existing defence capabilities;
- equipment and training for peacekeeping commitments which includes preventive diplomacy and deployment, peacemaking, peacebuilding, observer missions, and humanitarian assistance operations;



- simulation and training;
- dual-use products and technologies;
- research and development (R&D) contracts to advance state-of-the-art subsystems;
- ATC and airport security products as a result of infrastructure growth in the Asia-Pacific region.

These opportunities will depend on greater international co-operation, product standardization, off-the-shelf procurement and co-operative R&D efforts for the development and modernization of systems and weapons.

## Canadian Position

The defence-related sector is composed of approximately 500 small- to medium-sized companies, including the defence divisions of several U.S. and offshore-based multinational corporations. Only a few companies have annual sales in excess of \$100 million. A recent survey of the major players indicates that overall annual sales are estimated at \$4 billion, with about two thirds exported. The industry currently employs about 30 000 people. Generally, firms within the defence and related products industry sector rely primarily on domestic and U.S. markets. Over 80 percent of exports go to the United States.

Canadian companies in this industry sector are generally smaller than those in other industrialized nations. In spite of declining, highly competitive markets worldwide, Canadian firms have concentrated their efforts on developing subsystems and components for niche markets where they can be world leaders. The industry is an important contributor to Canada's high technology base. Successful products and services include:

- precision optics;
- robotic systems;
- bomb disposal suits and systems;
- light armoured vehicles;
- helicopter haul-down systems;

- explosive and narcotics detectors;
- acoustics, IR/RF and microwave processors, software and sensors;
- shipboard systems: machinery control, distributed computer system shipboard communications, displays, sonars and sonobuoys;
- communications systems: combat radios and radio relays and satellite communications;
- fire control systems for ships, tunnels and armoured fighting vehicles;
- avionics: flat-panel displays, GPS receivers and antennae, surveillance radars, inertial and radio navigation systems;
- simulators and training devices for aircraft, ATC, task trainers;
- ATC: oceanic systems, ATC systems, approach radar, microwave landing systems, communications systems, navigation aids.

Under the Canada-U.S. Defence Production Sharing Arrangement, Canadian industry enjoys privileged access to U.S. defence markets, exempting Canada from basic "Buy America" legislation. U.S. legislation also defines Canadian industry as part of the domestic industrial base. However, over the years, specific-purpose legislation such as the Berry Amendment, from which Canada is not exempted, has restricted industry access either directly or indirectly by making it subject to bureaucratic interpretation. With reduced defence expenditures, access is becoming more difficult. Canadian firms must concentrate on improving long-term strategic relationships with their U.S. counterparts. They will also have to develop new technologies and innovative defence products and services that respond to the needs of major U.S. defence customers if they are to succeed. Although the U.S. continues to be Canada's largest market for defence products and Canada imports a large majority of its defence products from the United States, strong markets for niche products are emerging in Asia-Pacific and the Middle East.

Accessible and suitable markets exist for Canadian products in the newly industrialized economies of the Asia-Pacific and Middle East regions. These include the Republic of Korea, Malaysia, Thailand, Indonesia, Egypt, Saudi Arabia, and Kuwait. Canada has recently procured defence industrial co-operation memorandums of understanding (MOUs) with Saudi Arabia and Australia; others are under consideration. Unless Canadian firms develop a local presence, they should deal through local agents familiar with the local business and political culture. Local production may be required and overhaul facilities are essential. Although considerable time, effort and commitment are required to finalize any sale in the Asia-Pacific and Middle East regions, these markets have much potential. More focussed effort is required to promote Canadian technology and expertise in defence products to realize full market potential.

In Europe, Canadian companies have had some success in penetrating niche markets with unique, competitively priced products. While it will be increasingly difficult to enter these traditional defence markets, Canada is in a good position to benefit from the European Union's continuing preoccupation with security and anti-terrorism measures. Canadian businesses will have to strengthen their competitive position by forging strategic joint-venture partnerships and other alliances, including establishing branch plants, to make significant inroads in the European marketplace where co-operation among European countries is growing.

## Strategic Direction

Government efforts will concentrate on helping industry to improve long-term strategic relationships with their U.S. counterparts and to access newly industrialized economies in the Asia-Pacific and Middle East regions.

## Priority Countries and Growth Markets

- Priority countries include the United States, Republic of Korea, Saudi Arabia, Kuwait, Malaysia, Indonesia and China. Growth markets include China, Taiwan, Indonesia, Saudi Arabia, Kuwait, Korea and Turkey.

## Marketing Support

- Encourage and assist industry initiatives in developing alliances, partnerships and related business arrangements, particularly in Asia-Pacific and Middle East markets. This involves continued liaison with Canadian embassy military attachés who identify and establish key contacts in the foreign country defence community (Department of Foreign Affairs and International Trade [DFAIT], Industry Canada [IC], Department of National Defence [DND]).
- Participate in strategically directed outgoing and incoming industry trade missions, major international trade fairs and promotional activities, in the U.S. and Asia-Pacific priority countries, particularly in the fields of avionics, simulation and training, robotics, advanced materials, defence security products, marine and environmental products and services, to assist industry in accessing global markets (IC, DFAIT, DND).
- Seek to increase the competitiveness of Canadian firms and the adoption of best manufacturing practices through promotion of Canadian industrial and government participation in the U.S. Navy's Best Manufacturing Practices (BMP) program (IC, DND).
- Provide Canadian suppliers with unique export assistance to help small- and medium-sized enterprises enter the export marketplace, e.g. Progress Payment Program, Canadian Commercial Corporation (CCC), Export Development Corporation (EDC).
- Identify and advise Canadian suppliers of potential export business opportunities through CCC, and the Aerospace Industries Association

of Canada. This involves informing firms of important policies affecting purchase decisions such as government procurement practices, possible financing requirements, import restrictions, internal government industrial support programs, requirements for local manufacturing content, technology transfer, and/or joint venture participation as conditions of sale.

- Strengthen ties between government and industry associations by liaising with existing defence industry associations (Canadian Defence Preparedness Association, Aerospace Industries Association of Canada) to develop and implement joint projects focussing on marketing, new technology developments, investment, joint ventures, skills upgrading, purchasing and contracting (IC, DFAIT, Public Works and Government Services Canada [PWGSC], DND).

### Market Access

- Endeavour to improve Canadian access to key U.S. defence and aviation markets by monitoring the U.S. legislative environment to help better position Canadian companies and by intervening with key decision makers in an effort to counter growing protectionist sentiment; negotiating international MOUs and joint venture prospecting (DFAIT, IC, DND).
- Through the implementation of the Industrial and Regional Benefits Policy (IC, Atlantic Canada Opportunities Agency [ACOA], Western Economic Diversification [WED], Federal Office of Regional Development - Quebec [FORDQ]), encourage prime contractors in federal procurement contracts to work with competitive Canadian companies to promote sector development, improve market access and export sales.

### Developing Technologies

- Encourage new investment and technology transfer by providing potential global customers with information such as a new comprehensive

defence and defence-related capability guide, and an electronic library of defence information (IC, DFAIT, DND).

- Co-ordinate visits to U.S. Department of Defense laboratories by Canadian companies with unique capabilities, to encourage new Defence Development Sharing Agreements that will promote technology transfer and improve market access and procurement contracts (IC, DFAIT, CCC, DND).
- Through participation in the North American Defence Industrial Base Organization, encourage Canadian industrial participation in activities that promote the integration of the defence and commercial industrial sectors and the greater use of dual-use products and technologies (DND, IC, PWGSC).
- Encourage investment in research and development through the delivery of funded programs (Defence Industry Productivity Program) to Canadian producers of defence products, as well as in developing dual-use products for niche markets in areas of advanced and emerging technologies (peacekeeping and environmental) in co-operation with the defence end user (IC, DFAIT, DND).

### New Long-term Markets

- Facilitate liaison between Canadian and foreign military and provide contact points between company and foreign military representatives through established industrial co-operation MOUs with priority countries in the Asia-Pacific and Middle East regions. Canada has MOUs with Saudi Arabia and Australia; others are under consideration (DND, DFAIT).
- Provide Canadian suppliers with unique export assistance, including counter-trade agreements, to assist them in exploiting emerging markets in the Asia-Pacific and Middle East regions (CCC, EDC, foreign military sales).

## **Contacts**

Industry Canada  
Marine and Defence Manufacturing  
and Defence Electronics Systems  
235 Queen Street, 6th Floor East  
Ottawa K1A 0H5  
Tel.: (613) 954-3388  
Fax: (613) 991-9469

Department of Foreign Affairs  
and International Trade  
United States Trade and Tourism Development  
Division  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 944-8821  
Fax: (613) 944-9119

Department of National Defence  
Industrial Development - Marine and Land  
101 Colonel By Drive  
Ottawa K1A 0K2  
Tel.: (613) 945-7099  
Fax: (613) 995-2305

## Defence Products

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Defence and Security Products Mission from Kuwait	Oct-95	Canada/Various	DFAIT	613-944-6983
<b>Asia-Pacific South</b>				
Royal Thai Navy Mission	TBD	Esquimalt	DFAIT	613-995-7662
Security Asia '95: Info Booth	Apr-95	Singapore	DFAIT	613-996-5824
Defence Seminar and Exhibition	Sep-95	Canberra	DFAIT	613-995-7652
Langkawi International Maritime Aerospace Exposition LIMA '95: Info Booth	Dec-95	Langkawi	DFAIT	613-996-5824
<b>East Asia</b>				
Market Study: Korea Defence Aerospace Opportunities	Apr-95	Seoul	DFAIT	613-995-8744
Naval Equipment Mission from Seoul	Jul-95	Vancouver, Toronto, Montréal, Halifax	DFAIT	613-995-8744
Airshow Canada: Incoming Missions	09-Aug-95	Vancouver	DFAIT	613-995-8744
<b>Japan</b>				
Airshow Canada 1995: Japanese Mission	09-Aug-95	Abbotsford	DFAIT	613-995-8596
<b>United States</b>				
Canadian Showcases	TBD	Washington, D.C.	DFAIT	613-944-9481
Canadian Technology Workshops	TBD	Washington, D.C.	DFAIT	613-944-9481
Market Study: Aerospace, Defence & Security	Apr-95	Minnesota, Colorado	DFAIT	613-944-9481
Aerospace & Defence Newsletter	Apr-95	Washington	DFAIT	613-944-9481
Mission to Warner-Robbins Air Force Base	Apr-95	Macon	DFAIT	613-944-9481
Market Studies in U.S. Defence Sector	Apr-95	Washington, D.C.	DFAIT	613-944-9481
Mission to Defence Contractors	May-95	Buffalo	DFAIT	613-944-9481
Mission in from U.S. Army Communications and Electronics Command	May-95	Eastern Canada	DFAIT	613-944-9481
Subcon '95	Jun-95	Toronto	DFAIT	613-944-9481
Canada Day - Fort Monmouth	Jun-95	Fort Monmouth	DFAIT	613-944-9481
Mission to Rome USAF Laboratories	Jun-95	Rome, N.Y.	DFAIT	613-944-9481
Defence Industrial Supply Centre Mission: Info Booth	Jun-95	Canada	DFAIT	613-944-9481
Airshow Canada '95	09-Aug-95	Abbotsford	DFAIT	613-944-9481

Note: Dates and locations are subject to change.



Activity	Date	Location	Dept.	Contact
USMC Modern Day Marine Show	Sep-95	Washington	DFAIT	613-944-9481
Interservice-Industry Training System Conference	Nov-95	Atlanta	DFAIT	613-944-9481
USAF Plant Visits	Nov-95	Dallas	DFAIT	613-944-9481
Defence Conversion Project Mission: Partnering	Nov-95	Chicago	DFAIT	613-944-9481
AFCEA Signal Symposium	Dec-95	Augusta	DFAIT	613-944-9481
Mission to U.S. Coast Guard	Dec-95	New Jersey, Atlanta	DFAIT	613-944-9481
SBA Partnership Project Mission	Jan-96	Washington	DFAIT	613-944-9481
Canada Day - Wright-Patterson AFB	Jan-96	Dayton	DFAIT	613-944-9481
Competition Advocate's Shopping List - ATCOM	Feb-96	St. Louis	DFAIT	613-944-9481
CANEX '95: National Stand	Feb-96	Philadelphia	DFAIT	613-944-9481
Canada Day - Tank Automotive Command Display	Mar-96	Warren, MI	DFAIT	613-944-9481

### Western Europe

Paris Airshow '95: National Stand	11-Jun-95	Paris	DFAIT	613-996-5555
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## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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Overview

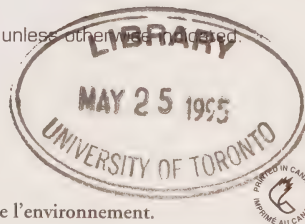
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*Aussi disponible en français sous le titre Équipement et services de protection de l'environnement.*





## Environmental Equipment and Services

Canada's rapidly growing environmental sector provides a wide range of environmental conservation, pollution prevention, control, protection and enhancement products and services for governments, manufacturers, resource industries and others.

Canada continues to support international activities in this industry that are aimed at enlarging shares of established markets with innovative technologies and capabilities targeted at niche market opportunities, and pursuing opportunities with international financial and donor organizations in the developing world.

The recently announced "Strategy for the Canadian Environmental Industry" strengthens the existing approach with the following initiatives:

- **International Environmental Technology:** a program for market-entry adaptation and demonstration of Canadian technologies that meet the needs of developing economies;
- **Environmental Conventions and Agreements:** encourages Canadian private-sector participation in business opportunities;
- **Strategic Alliances and Networks:** packages more competitively the products and capabilities of small- and medium-sized enterprises (SMEs), for penetrating markets;
- **Environmental Market Intelligence:** gathers, shares and develops strategic information with studies, workshops and market training;
- **International Environmental Management:** transfers Canadian public- and private-sector expertise to developing economies.

### International Environment

The world market for environmental products and services is expected to grow from US\$288 billion in 1993 to US\$391 billion by 1998 (*Environmental Business Journal*, 1994). Organization for Economic Co-operation and Development (OECD) countries dominate the sector, with

some 80 percent of the world market. Typically, environmental products and services account for 1 percent to 1.5 percent of the gross domestic product (GDP) for most OECD countries. However, many developing countries are rapidly accelerating their environmental agenda for reasons of economic sustainability, security and access to the world trading system.

Market forecasts call for an average annual growth rate of 7 percent over the next few years. Many firms report aiming some 50 percent of their international marketing efforts at the United States, 20 percent at the Pacific Rim, 18 percent at Western Europe and about 12 percent elsewhere. These targets are already changing as Canadian firms intensify sales efforts in Mexico, Latin America and the Pacific Rim. Average annual growth rates are shown in Figure 1.

Market priorities in the U.S. include integrated waste management, the management of hazardous waste and air pollution controls. Although most exports to the U.S. are manufactured products, Canadian firms are now pursuing services opportunities, such as contaminated site remediation. Many firms are positioning themselves to take advantage of 370 million consumers under the North American Free Trade Agreement (NAFTA) for new opportunities in trade, investment and technology development. This strategy has already delivered a first three-country air pollution control industry conference and trade show, mounted by Canada. As well, this new southern-focussed strategy has begun delivering trade and partnering initiatives in Mexico, Costa Rica, Chile, Brazil and Argentina.

Many of Canada's missions abroad place environment within the top three priority industrial sectors. Booming Asian growth in China, South

Korea, Taiwan and the Association of Southeast Asian Nations (ASEAN) has been attracting many Canadian firms.

In the European Union marketplace, a common body of environmental directives and standards is expected to simplify marketing. This may result in more concerted marketing to countries such as Germany and France, as well as to others such as Portugal, Spain and Greece, which are playing "environmental catch-up." For Eastern Europe, Canada will continue building trade and partnering with initiatives in Poland and the Czech Republic.

Many developing countries still need support from international financial institutions (IFIs) and regional development banks. Strategic environmental planning and institution-building initiatives are provided by the Canadian International Development Agency (CIDA). Capacity-building technical linkages are provided by Environment Canada (EC) research institutes. These sorts of initiatives serve as a basis for follow-up industry activity.

Canada is a significant financial contributor to the World Bank and all regional development banks. As a result, Canadian companies are eligible to bid on over \$40 billion in projects funded annually in developing countries by these institutions. The vast majority of these contracts, which are all dominated by hard currencies, are awarded under a transparent system of international competitive tendering.

All IFIs are continuing to increase their commitment to environmental projects. The World Bank lent US\$2 billion in 1993, and the Asian Development Bank designated US\$154 million for baseline studies, water supply projects, training and characterization of Viet Nam's environmental situation.

Inter-American Development Bank financing for environmental projects reached US\$1.2 billion for 71 projects in 1993. This represents a significant increase in the bank's lending activities since 1990, when it funded US\$488 million for 28 projects. In addition to environmental

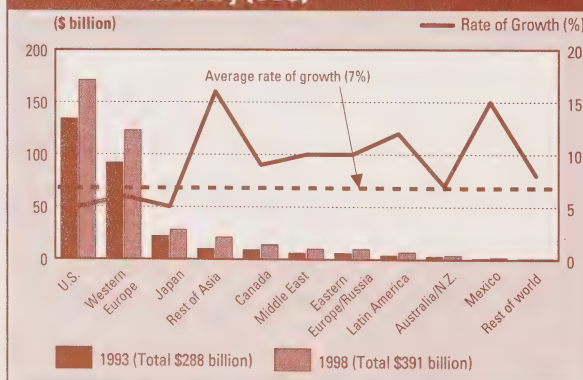
projects, significant environmental components are included in projects for other sectors, estimated at about US\$1 billion during 1990-1993. The bank has also been instrumental in mobilizing additional funds of some US\$1.5 billion for 1993. To date, the bank's projects have focussed on natural resource conservation, improvement of the urban environment, pollution control and local government institutional strengthening.

Other sources of funding include the United Nations Environment Program (UNEP), the World Bank's Global Environment Trust Fund (GEF), the multilateral fund under the Montréal Protocol for the Protection of the Ozone Layer, and CIDA. For new exporters, accessing these and more conventional sources of financing demands knowledgeable and effective marketing.

Awareness of the factors shaping international markets is critical.

- Fundamentally, the market for environmental products and services is driven by public demands that political leaders take environmental considerations seriously and resolve environmental problems through laws, regulations and funding.

**Figure 1 — Revenues of Global Environmental Industry (US\$)**



Source: Environmental Business Journal, 1994

- Those environmental considerations drive the market and help develop the domestic industry and make it more competitive. However, they also serve as non-tariff trade barriers, and can keep out products or processes from countries that are perceived as having less stringent environmental standards.
- Over the long term, all industry sectors will be required to take a more integrated and comprehensive approach, to develop and follow more acceptable standards and practices, to recognize and internalize environmental costs, to manage pollution at the source, to build in "process" changes rather than add on "end-of-pipe" solutions, and to develop technologies that ultimately aim for "zero discharge."
- Recognition of sustainable development and implementation of policies linking long-term economic growth to environmental management are essential.
- Environmental issues are increasingly linked to global economic and political stability.

New demands are emerging for energy efficiency and renewal, for the sustainable management of resources and biodiversity and for more global responsiveness to issues such as ozone depletion and global warming. There is a case for the promotion of technologies across all industrial sectors that may be more environmentally friendly, from transportation systems, to construction, to a wide range of industrial processes and consumer products. A wider industry definition will become extremely important for future environmental industry development. Environmental responsiveness is strategic to all industrial sectors and key to the economic sustainability of both developed and developing countries.

## Canadian Position

Canada's environment industry is composed of some 4000 firms marketing a wide range of products and services. Largely composed of SMEs, it represents 142 000 knowledge- and

science-based jobs, with output per worker at \$130 000, some 25 percent higher than general manufacturing.

This fast-growing sector is undergoing continuous definition in response to a changing environmental agenda. An estimated 65 percent of environment firms provide services, and 35 percent are involved in manufacturing. The latter are believed to have shipments of about \$5 billion per year, while environmental services account for \$4 billion in revenues. Exports amount to approximately \$1 billion annually, with almost 80 percent directed at the U.S. market.

Canada has a solid environmental science and technology base upon which to build, including research and development (R&D) facilities within companies, universities and federal and provincial governments. In addition, Canada has built a good reputation for monitoring and measurement instrumentation; emission prevention and control technologies; and solid and liquid waste-handling equipment (specialty incinerators, shredders, compactors, recycling systems and equipment). Capabilities extend to the manufacturing of equipment components, including attachments for pumps and valves, separators and filters.

The environmental services subsector includes firms that provide consulting and related engineering, scientific and technical services. These services are offered in such areas as studies, plans and projects for resource conservation and protection, water supply, sewage collection and treatment, solid waste disposal, industrial waste water treatment, air pollution controls and energy conservation. Consulting engineering firms, software developers, solid waste management operators and recyclers, private laboratories and research establishments are included in this group.

Environmental services industry firms have won many offshore engineering projects and have enjoyed success through activities and projects supported by IFIs. Multidisciplinary environmental consulting, acquisitions and mergers, joint ventures and strategic alliances are increasingly

being used to enhance corporate capabilities and to expand market share.

The Canadian Office for Technology Exchanges (COTE) helps developing countries sustain their resources and strengthen their economies. COTE activities in the past year, related to pursuing opportunities in international conventions and agreements, have also uncovered complementary, more conventional commercial prospects in new markets for many firms.

The primary challenge is to continue building momentum in international markets, including markets of the developing world, with a strategic planning approach supportive of market-responsive environmental products and services. It is important for the industry to establish its dominance in the domestic market, and to be well positioned internationally. During the past five years, active Canadian exporters have doubled to over 600 firms, with another 1200 export-ready. The Government will work to increase the number of exporters and to broaden their market base by exploring new market opportunities.

## Strategic Direction

To add to the existing strategic approach and improve the competitive position of the environmental sector, the Government has developed with industry "A Strategy for the Canadian Environmental Industry," a more complete "tool-kit" for exporters. It includes:

- the Environmental Market Intelligence Program: studies, workshops, conferences, promotional buyer-supplier events, focus groups and supporting databases (Industry Canada [IC], the Department of Foreign Affairs and International Trade [DFAIT]);
- delivery of information and intelligence, targeted trade shows, missions and other exchanges, for technology acquisition, trade enhancement, investment and business alliances promotion (IC, DFAIT, EC);
- strategic market and international business planning to guide trade, technology transfer and partnering arrangements with advanced countries including the United States, Western Europe and Japan (IC, DFAIT);
- the International Environmental Management Program: an initiative to transfer to developing economies Canadian public- and private-sector expertise and training relating to regulations, policies and technical programs. This supports the export of Canadian environmental systems, equipment, expertise and technologies (EC, IC, CIDA);
- the Strategic Alliances and Networks Program: co-operation of Canadian services and products suppliers through formation of strategic alliances, business networks and other links to tackle markets in Asia, Latin America, Eastern and Western Europe, the Middle East and other areas (IC, DFAIT, EC);
- priority alliances among Canadian, Mexican and American firms, for investment, trade, technology transfer and new business development under the NAFTA (DFAIT, IC, EC);
- country-to-country co-operative arrangements such as memorandums of understanding (MOUs) as required, to improve trade access (DFAIT, IC);
- the International Environmental Conventions and Agreements Program: focussing on IFI-supported activities, the Canadian Environmental Training Opportunities Program and other R&D and technical capacity-building initiatives (such as the Montréal Protocol bilateral program) unlocks entry mechanisms and encourages the participation of Canadian environmental companies in working with developing country clients. The delivery of international programs and projects provides market-entry and opens follow-up business opportunities (CIDA, DFAIT, IC, EC);
- targeted pursuit of other IFI-supported environmental projects, with particular



emphasis on the Pacific Rim markets of Indonesia, Thailand, Malaysia and Singapore (IC, DFAIT);

- the International Environmental Technology Demonstration Program: the Government will examine the feasibility of establishing a proposed revolving fund to assist market entry and to adapt and demonstrate technologies in developing countries, with an emphasis on clean processes and proven technologies (IC, EC, DFAIT, CIDA).

## Contacts

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Department of Foreign Affairs  
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Sectoral Liaison Secretariat  
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Fax: (613) 943-8820



## Environmental Equipment and Services

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Environmental Mission	Jun-95	Johannesburg	DFAIT	613-944-6590
African Development Bank Seminars	Oct-95	Abidjan	DFAIT	613-944-6579
Air Quality Monitoring and Air Pollution Seminars	Dec-95	Tel Aviv, Jerusalem	DFAIT	613-944-6994
<b>Asia-Pacific South</b>				
Environmental Trade Mission	May-95	Asia-Pacific	EC	819-953-3090
Thai Mission to 7th Canadian Conference on Geomatics: Info Systems	Jun-95	Ottawa	DFAIT	613-995-7662
Environmental Technology Seminars	Aug-95	Sydney, Melbourne, Adelaide, Perth	DFAIT	613-995-7652
Biological Gas Cleaning Mission	Jan-96	Germany, Netherlands	EC	819-953-2844
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Environmental Technology Workshop/Mission	Jun-95	Slovakia	IC	613-941-0886
Mission - Environmental Management Units	Jul-95	Romania	IC	613-941-4517
Environmental Technology Workshop/Mission	Oct-95	Romania	IC	613-941-0886
<b>East Asia</b>				
Environmental Technology Workshop/Mission	TBD	China	IC	613-941-0888
Energy Efficiency Mission	May-95	China	IC	613-941-0888
Taiwan Air Pollution Incoming Buyers' Mission	May-95	Vancouver, Calgary, Toronto	DFAIT	613-995-8744
Taipei International Environmental Protection Show	Jul-95	Taipei WTC	DFAIT	613-995-8744
Environment '95 - National Stand	Aug-95	Seoul	DFAIT	613-995-8744
Taiwan Waste Water/Ground Water Treatment Mission	Oct-95	Vancouver, Toronto, Montréal	DFAIT	613-995-8744
Environmental Technology Workshop/Mission	Oct-95	India	IC	611-395-4526
Environmental Business Mission	Nov-95	Malaysia, Indonesia, Viet Nam	IC	613-954-2938
Environmental Business Mission	Jan-96	Taiwan, Korea	IC	613-954-2938
Solid Waste Technology - Mission	Jan-96	China	IC	613-941-0888
Maritime Pollution Control Seminar	Jan-96	Seoul	DFAIT	613-995-8744

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
<b>Latin America and the Caribbean</b>				
Canada-Brazil Environmental Technology Workshops	Apr-95	Santiago	IC	613-954-3434
Enviro-Pro Trade Fair	25-Apr-95	Mexico City	DFAIT	613-996-8625
Mission - Pro Eco-95 Conference	May-95	Monterrey	IC	613-954-3229
Environmental Technology Workshop/Mission	Jul-95	Sao Paulo	IC	613-954-3434
Environmental Technology Workshop/Mission	Oct-95	Buenos Aires	IC	613-954-3434
<b>Multiple Markets</b>				
Mission - Technology Transfer	Sep-95	Germany, U.S., Japan	EC	819-994-3475
Environment & Energy Conference	31-Oct-95	Toronto	Ontario	416-323-4581
Environmental Business Mission	Nov-95	Europe, North Africa	IC	613-954-3382
Globe '96 - Incoming Visitors	Mar-96	Vancouver	DFAIT	613-996-1431
Globe '96 - Info Booth	Mar-96	Vancouver	IC	613-954-3211
<b>United States</b>				
Strategic Alliance Seminar/Mission	Apr-95	Minneapolis	DFAIT	613-944-7348
Mission - Air Pollution Control	Apr-95	Los Angeles	DFAIT	613-944-9478
U.S. Environmental Market Newsletter	Apr-95	U.S.	DFAIT	613-944-9478
Waste Expo '95 - National Stand	26-Apr-95	Chicago	DFAIT	613-944-9478
Mission/Partnering Hazardous Waste/Site Clean-up	May-95	Cincinnati	DFAIT	613-944-9478
Market Study - Hazardous Waste Products & Services	May-95	New York, NY	DFAIT	613-944-9478
Toronto Environmental Show - Eastern U.S. Mission	May-95	Toronto	DFAIT	613-944-9478
New England Environmental Expo - National Stand	09-May-95	Boston	DFAIT	613-944-9478
Environmental Laboratories Partnering Workshop	Jun-95	New York, NY	DFAIT	613-944-9478
Hazardous Waste/Site Remediation Partnering Workshop	Jun-95	San Francisco	DFAIT	613-944-9478
Canada-U.S. (CUE) Hazardous Waste Partnering	Aug-95	Oak Ridge	DFAIT	613-944-9478
TRICIPE Show/Hanford Clean-up - Info Booth	Aug-95	Richland	DFAIT	613-944-9478
Mission to Army Environmental Centre of Excellence	Sep-95	Rock Is.	DFAIT	613-944-9478
Market Study - Pulp & Paper, Northwest U.S.	Sep-95	Seattle	DFAIT	613-944-9478
Market Report - U.S. Department of Environment Sites	Sep-95	Seattle	DFAIT	613-944-9478
Market Study - Defence Environmental Restoration	Sep-95	Ottawa	DFAIT	613-944-9478
American Military Engineers Conference - Info Booth	Sep-95	Anchorage	DFAIT	613-944-9478
Eco Expo '95 - Info Booth	Sep-95	Boston	DFAIT	613-944-9478
Market Study - Industrial Waste Water	Sep-95	New York	DFAIT	613-944-9478
Hazardous Waste/Site Remediation Mission	Oct-95	Aberdeen, MD	DFAIT	613-944-9478
Mission: Site Remediation	Oct-95	San Diego	DFAIT	613-944-9478



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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- Overview
- 1. Advanced Manufacturing Technologies
- 2. Agriculture and Food Products
- 3. Aircraft and Parts
- 4. Automotive
- 5. Biotechnologies
- 6. Business, Professional and Educational Services
- 7. Chemicals, Plastics and Advanced Materials
- 8. Construction Products
- 9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
- 10. Cultural Industries
- 11. Defence Products
- 12. Environmental Equipment and Services
- 13. Fish and Sea Products
- 14. Forest Industries
- 15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
- 16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
- 17. Minerals and Metals
- 18. Oil and Gas Products and Energy Equipment
- 19. Power Equipment
- 20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
- 21. Rail and Bus Equipment
- 22. Space
- 23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Poissons et produits de la mer.*





## Fish and Sea Products

The Canadian fish and sea products industry comprises firms engaged in the processing and marketing of fish, shellfish, and marine plants and animals, as well as byproducts such as fish meal and fish oil. These firms process fish supplied by Canadian fish harvesters, produced by Canadian aquaculture (fish farming) operations, or imported from foreign suppliers for further processing in Canada.

### International Environment

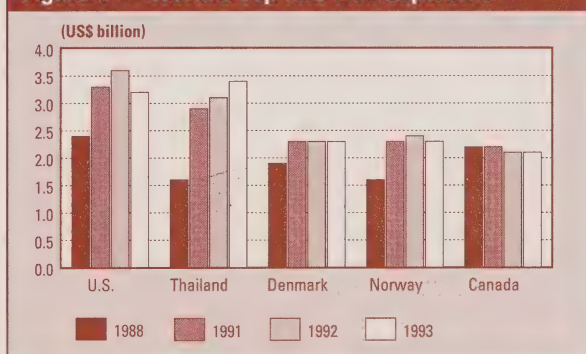
The annual world harvest of fish and shellfish (including aquaculture) in 1992 was 98.1 million tonnes, an increase of 1.06 million tonnes from 1991. Up to 31 percent of the total world fish and shellfish catch was processed into fish meals, oils and other industrial products. International wild-capture fish levels are stagnant or decreasing, and fish catch patterns have changed.

World demand is now expected to grow steadily from under 100 million tonnes in 1990 to 120 million tonnes by the end of the decade. The earth's population is expected to grow by 16.7 percent from 5.25 billion to 6.13 billion by the year 2000, with 92 percent of that growth occurring in developing countries. Global per capita seafood consumption may rise from 13.4 kg (edible weight) to 15.2 kg by the year 2000, meaning an increase in consumption from 64 million tonnes to 94.5 million tonnes. As a result of the overbuilding of fishing fleets, the wild capture fishery catch has begun to decline,

and aquaculture products will play a greater role in meeting world demand. In 1992, world aquaculture production was 13.9 million tonnes (US\$27.6 billion). Global aquaculture farming is steadily maturing, showing a growth rate of 13.6 percent a year since 1984, with production expected to reach 19.6 million tonnes by the year 2000.

Twenty years ago, developed countries accounted for more than 60 percent of the wild fish catch. The situation is now reversed, with developing countries now accounting for this 60-percent share. A striking illustration of the changes in wild fisheries catches is China, which has overtaken both Japan and the former Soviet Union (FSU). In 1993, China maintained its leading position for the fourth year in a row with massive landings of 16.5 million tonnes, followed by Peru with 8.4 million tonnes. Next was Japan with 7.9 million tonnes and Chile with 6.0 million tonnes. The Russian Federation dropped to sixth overall at 4.7 million tonnes, while the United States moved up to fifth position with an increase of landings to 5.87 million tonnes. Canada was eighteenth with 1.25 million tonnes, dropping three positions since 1992.

Figure 1 — World's Top Five Fish Exporters



Source: Food and Agricultural Organization, Department of Fisheries and Oceans

### Access Issues

Although Canada has benefited from reduced tariffs achieved through the General Agreement on Tariffs and Trade (GATT), some tariffs and non-tariff barriers such as import licensing, quotas, unjustified technical standards and health regulations, continue to inhibit Canadian access to foreign markets. In addition, tariffs are significantly higher on further-processed products. In the European Union (EU), for instance, tariffs remain higher than in many developing countries.

## Environmental Considerations

Consumer-driven environmental issues are more and more likely to affect trade as environmental concerns come to the fore, both directly as in the effect of pollution on fish and fish habitats, and indirectly through the proper use and management of seas and oceans. The management of natural resources such as fish stocks is also receiving greater attention, with management authorities moving to a more encompassing approach, for example, from a single species to a larger ecosystem approach.

Internationally, Canada shows strong leadership in marine environment issues. In June 1994, Canada hosted a meeting of experts on the Montréal guidelines (1985) under the auspices of the United Nations Environment Program. Canada works closely with other maritime nations to deal with the global environmental fisheries crisis caused by overfishing of the "global commons." With the Atlantic groundfish crisis as a catalyst, Canada is working with these nations to develop a practical and effective set of rules to manage high-seas fishing of straddling and highly migratory stocks. On the Pacific coast, Canada continues to press for conservation and equity as outlined in the Pacific Salmon Treaty signed by Canada and the United States in 1985. The Treaty expired in 1992, and in 1993 a one-year arrangement was negotiated, but no agreement was reached in 1994.

## Aquaculture

The growth of aquaculture will not be without limitations and problems. Disease, climate changes, environmental degradation and the increasing need of high-protein feed stuffs will modify the growth rate of the global aquaculture industry. These impacts will change the species that are utilized and will require producers to adapt. The industry will have to streamline its operations to realize even a marginal profit increase. It will be necessary to develop operating

systems management and quality control processes, and to conduct more research in genetics and marketing.

The production of high-value (in marketing terms) carnivorous aquaculture fish and shrimp species, such as trout, salmon, yellow-tail, eel, seabream, sea bass and marine shrimp, almost totally depends on the use of compound aqua feeds.

Fish meal and oil are currently the essential feed ingredients for all industrially produced aqua feeds for carnivorous fish and shrimp. Generally, fishery products, such as fish meal, fish oil, fish protein concentrates, squid and shrimp meal, make up about 70 percent of the total aqua feed for most farmed carnivorous species. Recent estimates suggest that 1 million tonnes of fish meal were used in aqua feeds in 1992. Fish meal/oil usage in aqua feeds is expected to increase to 1.5 million tonnes or 20 percent of total world supply by the year 2000. Compound aquaculture production will increase by 5 percent per year to over 4.5 million tonnes by 2000. Total compound animal feed production in 1993 was 610 million tonnes (US\$55 billion), in which aquaculture usage was only 3 percent, with the rest used for farm livestock production.

If aquaculture is to play a significant role in food security, the species chosen for mass production should have herbivorous feeding habits to reduce dependency on high-quality, food-grade, protein-rich feed inputs. The majority of aquaculture production in developed countries is based on the culture of high-value carnivorous fish or shrimp species, whereas in developing countries it is based generally on low-value herbivorous species. Developing countries currently account for 80 percent of total world aquaculture production, and they are net protein producers with more energy-efficient farming systems. The real contribution of aquaculture products will be measured by its affordability as a much needed source of cheap protein for the global population.

## Canadian Position

The Canadian fish, marine plants and seafood industry has a highly diversified resource of shellfish, pelagics and groundfish, and is well regarded globally for producing and exporting a variety of top-quality, pollution-free products. Exports are primarily in the live, fresh, frozen, cured and canned forms. Processors pursue opportunities for innovative, ready-to-serve product forms in niche markets, and the Canadian fishing industry continues to be a major contributor to the economies of many Atlantic, Pacific and inland communities.

The industry is currently undergoing significant adjustment as a result of supply shortages for certain finfish species, intense competition in foreign markets and increased global supply of certain groundfish species and salmon. Total fishery landings in Canada decreased to 1.25 million tonnes in 1993, down from 1.3 million tonnes in 1992. The value of landings in 1993, at \$1.4 billion, fluctuated little from 1992 levels. On the Atlantic coast, groundfish landings declined by 38 percent to 286 634 tonnes in 1993. Total value of these landings decreased by 41 percent to \$187 million. Total landings of pelagic species fell 5000 tonnes to 281 031 tonnes in 1993, resulting in a total value of \$74 million. Shellfish landings rose to 260 030 tonnes in 1993, up from

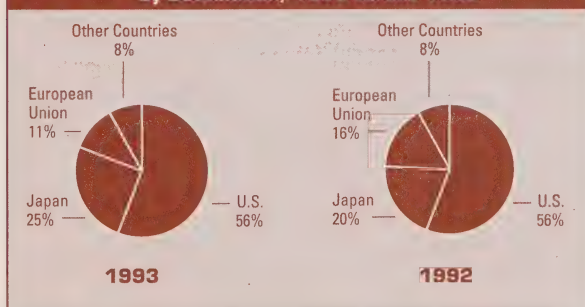
238 214 tonnes the previous year. The value of shellfish landings amounted to \$635 million in 1993, an increase of approximately 8 percent over 1992.

On the Pacific Coast, landings decreased from 295 851 tonnes in 1992 to 279 984 tonnes in 1993, yet total value increased to \$423 million from \$416 million in 1992. Shellfish landings decreased in 1993 to 26 789 tonnes, from 31 201 tonnes in 1992, while total value increased by 18 percent to \$73 million. Of the 34.7 million salmon caught in British Columbia's commercial fisheries in 1993, nearly 14 million were Fraser River sockeye, a new record catch. Overall, 18 million sockeye were caught in B.C. waters in 1993, 6 million more than anticipated. Catches of coho (1.8 million) and pink salmon (9.7 million) were substantially below forecast levels, while chinook catches totalled 600 000, as expected. A catch of 4 million chum salmon was twice the amount forecast. Salmon landings were valued at \$190 million, an increase of 16 percent from 1992.

In 1993, Canadian fisheries production was valued at \$2.9 billion, and Canada exported 500 318 tonnes of fish products, valued at \$2.57 billion, compared to 1992 exports of \$2.49 billion. For the first six months of 1994, Canadian exports increased by 4 percent to \$1.18 billion, compared to the same period in 1993. The growth in exports can be attributed to high-valued shellfish and aquaculture products mainly to the United States and Japan. Canada currently ranks fifth in the world in seafood export value. The domestic market has declined, from 24 percent of product value sold in 1992 to 16 percent in 1993. This displacement is being filled by increased imports of 17 percent in quantity and 10 percent in value over the first half of 1994.

In 1993, Atlantic Canada had the largest commercial fishery with a total production of \$1.8 billion. The processing sector on the Atlantic Coast consists of approximately 900 establishments that employ more than 60 000 individuals. Three

**Figure 2 — Canadian Fish and Seafood Exports by Destination, 1993 versus 1992**



Source: Statistics Canada, International Trade Division

large, vertically integrated companies account for half of the production value, but diversification in size must be noted. For example, 228 of Nova Scotia's 320 registered fish processing plants have sales between \$2 million and \$10 million.

The Pacific fishery consists of about 200 processing facilities, with average monthly employment estimated at 5700. Highly seasonal employment peaks to about 10 000 in August and decreases to about 3000 in December. The value of fisheries production was approximately \$0.9 billion in 1993, with salmon accounting for 46 percent and herring 20 percent of total production. Canned and frozen salmon account for 80 percent of the salmon output value.

Canada's freshwater fisheries are concentrated around the Great Lakes and in central and northern Canada. In 1993, freshwater landings totalled over 35 000 tonnes with a value of \$160 million.

Canada's aquaculture industry ranges from small family operations to large integrated multinational firms. Currently, salmon, oysters, trout and mussels are the main species produced by the aquaculture sector. Scallops, manila clams and arctic char have entered the commercial stage, but total production remains small. Total value of aquaculture production (farm gate) in Canada was more than \$290 million in 1993 as compared to \$259 million in 1992. Additionally, the supply and services sector of the fish farming industry generated more than \$270 million in domestic and export sales.

The value of aquaculture production continues to surpass the landed value of wild production for trout, salmon, mussels and oysters. In 1993, farmed salmon production represented 56 percent of the value of all commercial salmon production. Farmed trout and mussels account for virtually the entire commercial production, with aquaculture oysters representing 85 percent of total value in 1993.

In Atlantic Canada, it is generally accepted that a 50-percent target reduction in capacity is

required to achieve an economically viable and ecologically sustainable fishery. The offshore fleet has already undergone substantial capacity reduction without government intervention. For example, there are currently 48 vessels greater than 100 feet registered to fish groundfish, compared to 125 active offshore groundfish vessels in 1989, a 60-percent decrease. Overcapacity is the principal cause of the industry's dependence on government support. In 1981, for example, a fishing crew's income supplementation through Unemployment Insurance (UI) benefits equalled 27 percent of total earnings. By 1990, this increased to 52 percent. The increase in income from UI demonstrates the industry's limited capacity to sustain employment. Similarly, plant workers derive an average of 50 percent of their individual incomes from Unemployment Insurance benefits. Long-term reduction in the industry is necessary if it is to remain viable and sustainable.

Capacity reduction is a key component of the Atlantic Groundfish Adjustment Strategy (TAGS), implemented on May 16, 1994, to assist an estimated 30 000 fishers and plant workers affected by groundfish closures in Atlantic Canada and Quebec. TAGS is a \$1.9-billion, five-year program designed to provide adjustment measures for individuals to achieve a 50-percent reduction in capacity and to promote industry renewal. Other programs and policies are also required, such as a new licensing policy, reforming the Unemployment Insurance program and creating economic opportunities to complement capacity-reduction efforts.

Additional challenges facing the Canadian fisheries sector include:

- the impact of globalization, such as increasing competition from developing countries with low-wage structures, including Russia and China, which requires that the Canadian fish and seafood sector pursues strategic partnerships, alliances and investment opportunities to secure raw material for processing and markets for Canadian products, particularly value-added products;



- lower-priced competing proteins such as chicken, whitefish substitutes, and the loss of cod markets in the U.S. to other fish such as catfish, tilapia, hoki, Alaska pollock, and hake;
  - process automation and design, development and use of new packaging materials, and adaptation of biotechnology processes, which will require scientists, fishers, financiers, processors and marketers to work closely together to provide a stronger base for Canada's trade performance;
  - a need to heighten the awareness of international consumers, institutions and retailers of Canada's consistently high-quality supply of traditional and non-traditional, farmed and value-added fishery products;
  - a need to review Canada's harvesting and fish inspection regulations to allow Canadian firms to operate effectively in a competitive environment;
  - a need for marketing strategies for some non-traditional species in light of uncertain resource forecasts and the high cost of product and market development;
  - a need for the Canadian industry, particularly on the West Coast, to reduce its dependence on Japan, which is the major frozen salmon market and the only market for salted herring roe;
  - the slow progress on new product development due to tariff and non-tariff barriers on value-added seafood in many foreign markets.
- to maintain resource sustainability and increase competitiveness, considerable pre-competitive, co-operative initiatives now exist in product-processing and post-processing technology such as research on ozonation and wastewater treatment;
  - the seafood trade in British Columbia is becoming more global, increasingly buying, processing and marketing products other than those of Canadian origin and exporting them worldwide;
  - Newfoundland and Nova Scotia have replaced an estimated 80 000 tonnes of raw material needs through global sourcing, and have effectively brought these products to market;
  - the West Coast industry has been successful in increasing its penetration of the U.S. market, and is actively looking to growth areas such as Latin America and Mexico;
  - the establishment of the British Columbia Salmon Marketing Council and the involvement of primary producers in marketing issues is giving a new focus to quality and competitiveness at the producer level.

Several positive developments are under way in the Canadian fisheries industry that demonstrate greater innovation and competitiveness — necessities for survival in the global marketplace. The West and East Coast fisheries in particular have recorded some success in adjusting to the emerging realities of the 1990s and beyond. For example:

- joint ventures, technology exchanges and marketing arrangements with foreign firms in Japan, the United States and in European countries are increasing;
- Proximity and ease of access to the U.S. market is a major advantage for Canadian exporters. Canada has also benefited from preferred access to the United States under the Canada-U.S. Free Trade Agreement (FTA). The FTA set out a 10-year schedule for tariff elimination, with all tariffs on Canada-U.S. trade to be eliminated by 1998.
- The Canadian industry remains concerned over unpredictable U.S. border inspection practices, particularly in shipments of fresh fish. Work is continuing in the Technical Working Group on Fish and Fishery Products established under the FTA. Success has been achieved in determining equivalency in the action levels for assessing the quality of frozen groundfish products. Technical exchanges are continuing, including cross-border training of inspection staff and electronic interfacing of inspection databases.



The U.S. is now in the process of finalizing its seafood Hazard Analysis Critical Control Point (HACCP) program. It is expected that Canada and the U.S. will be able to conclude a mutual recognition agreement, thereby facilitating market access.

Work is proceeding on improving harmonization of sensory standards used by Canada and the United States. It is expected that a declaration of equivalency will soon be made in molluscan shellfish inspection programs.

The North American Free Trade Agreement (NAFTA), which took effect on January 1, 1994, gives Canadian exporters preferential access to a market of over 85 million people in Mexico. The NAFTA will eventually eliminate tariffs on Mexican imports of fishery products from Canada and the United States. Tariffs have already been eliminated for a number of species of interest to Canada, including Atlantic and Pacific salmon, crab, hake, herring, mackerel, haddock and dried smoked fish. In addition, tariffs will be phased out over five years for lobster, scallops, mussels, oysters, halibut and prepared and processed fish, and over 10 years for frozen fish fillets. Mexican import licences for lobster will no longer be required.

Implementation of the Uruguay Round of the GATT will improve Canadian market access in many countries, particularly in Japan where tariffs will be reduced by 30 percent, in Korea where tariffs will decline 10 percent to 20 percent, and in the EU where groundfish tariffs on many items of interest to Canada will fall to the 7.5-percent to 12-percent range. Opportunities will also arise in developing countries, which will reduce tariffs by about 30 percent and bind them.

Improvements for Canadian firms have also been realized, with better market access to the EU resulting from the 1993 recognition of equivalency of Canada's fish inspection system with its reliance on its Quality Management Program. This success has led to an exemption from the

mandatory import inspection requirements implemented by the EU in January 1993. Fishery products not currently covered by the derogation include trade in live molluscan shellfish products and, because of fish health and disease concerns, of live aquaculture products. Efforts will be undertaken to conclude agreements for these products in 1995, to permit similar ease of access into the European Union.

Concerns have been raised that a global veterinary agreement on meat and fishery products proposed by the EU might have an impact on the benefits Canada now receives under Commission decision 93/495/EEC, an equivalency agreement that establishes conditions for importing fishery products from Canada to the European Union. In relation to this, the EU has also introduced minimal sampling frequencies on imports, which might result in additional costs and delays for Canadian imports to the European Union.

Canada has sought assurances that the mutual recognition directive for fish and fish products will continue to apply while a global veterinary agreement is being negotiated.

A series of memorandums of understanding has been concluded in the areas of inspection, certification, technical co-operation, trade and information exchanges. Such agreements are now in operation with Australia, Japan, Thailand, the Philippines and Iceland.

It is expected that new inspection agreements will be completed in 1995 with New Zealand and South Africa, which should provide improved access for Canadian products to these markets.

The Department of Fisheries and Oceans (DFO) will negotiate with countries where potential exists for inspection agreements. Argentina, Chile, and possibly other Latin American countries might be considered for future agreements. It is also likely that the inspection agreement with Iceland will be broadened into a mutual recognition agreement.

## Strategic Direction

### Enhance and Defend Market Access

- given the conclusion of the Uruguay Round, with the exception of some opportunities to seek lower tariffs through NAFTA mechanisms, and through negotiating lower unbound rates, the focus will be on addressing and removing non-tariff barriers (NTBs);
- NTBs are perceived to be proliferating; working with industry, the Government will maintain and update the fish tariff and NTB inventory, with regular status reports on efforts to resolve issues provided to industry and sector advisory groups;
- priority issues have been identified and will be addressed (shown below). Industry will report any new problems, and review the priority list as issues develop.

### Tariff Liberalization Opportunities

- Mexico: accelerated tariff reductions, e.g. canned herring;
- Japan: for all tariffs, pursue opportunities for autonomous suspensions and other administrative guidelines to make trade more profitable;
- newly industrialized countries (NICs): seek lower unbound tariffs, pursue maximum possible tariff reductions for fisheries products as Chinese and Taiwanese GATT accessions are finalized;
- European Union: pursue unilateral reductions in herring and smoked salmon tariffs;
- United States: listeria and border inspection regime;
- European Union: scallop nomenclature (France); import inspection regime (France and EU derogation or mutual recognition agreement); arbitrary inspection procedures (France in particular).

### Non-tariff Barriers

- Korea, Taiwan: address all NTBs;
- Australia: salmon import ban (now in GATT XXII consultations);
- through the NAFTA, negotiations of new rules on subsidies, countervailing duties and anti-dumping actions need to be monitored to protect fisheries interests (Department of Foreign Affairs and International Trade [DFAIT], DFO).

### Trade Enhancement

- the possibility of negotiating bilateral agreements such as the mutual recognition of inspection systems will be investigated;
- the 1948 Molluscan Shellfish Agreement will be updated;
- preparations will be made for the implementation of CODEX standards, expected to be approved by the Commission in 1995 (DFO, DFAIT, Seafood Industry Policy Advisory Committee [SIPAC]).

### Trade Development

- enhance the SIMS group with the inclusion of a Sectoral Working Group on International Trade (SAGIT) working committee to help improve the effectiveness of interdepartmental activities, and co-ordinate activities of the provinces under a "Team Canada" approach;
- work with industry to focus trade development activities on high-priority markets identified by industry;
- monitor progress in achieving target results;
- work with industry to develop special trade development activities (including new approaches not currently supported through existing programs) in market niches, as identified by industry;
- begin reviewing financial and taxation tools that could help companies diversify their exports and increase the per-unit value of exported goods and services;

- continue to send Canadian experts to international organizations to provide education and training that could lead to trade links in the future;
- examine the feasibility of removing the \$50-million non-eligibility criteria for Program for Export Marketing Development (PEMD) assistance under current rules, recognizing that the current federal government program review may determine different criteria for companies, with special consideration for small- and medium-sized enterprises (SMEs), thus providing transparency to the program and enhancing international strategic alliances and joint ventures;
- undertake an annual review of previous years' international trade development programs, and develop an assessment of the contribution of these programs to trade development (DFAIT, SAGIT, provinces, CIDA, DFO, Department of Finance).

## **Market Intelligence**

- improve the quality of information and intelligence about the seafood industry outside Canada and, for selected missions, improve the timeliness of the information collected. DFAIT initiated FaxLink, a fax-on-demand communications systems and an Electronic Bulletin Board, to facilitate access to fisheries market information for Canadians;
- ensure that industry and government work to improve the dissemination and timeliness of information collected, and that industry assumes responsibility for providing feedback and information to DFAIT missions;
- enhance identification and feedback to Canada on commercial uptake of foreign harvesting, processing, post-processing and aquaculture technologies by greater use of the network of technology officers in DFAIT missions (DFAIT, SAGIT).

## **Trade Fairs and Missions**

- move to describe, strengthen and take advantage of Canada's image as a supplier of quality products;
- ensure that government and industry co-operate in selecting appropriate Canadian firms to attend trade fairs and missions. Through the ITBP consultation process, they will also collaborate in planning trade promotion activities carried out by Canadian trade offices abroad;
- explore the possibility of industry or other federal-provincial secondments to key overseas missions through greater use of the Executive Interchange Program (DFAIT, SAGIT).

## **Contacts**

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Inspection and Enforcement  
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Ottawa K1A 0C5  
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Fax: (613) 992-0921

Canadian International Development Agency  
Natural Resources Division  
Professional Services Branch  
200 Promenade du Portage  
Hull, PQ K1A 0G4  
Tel.: (819) 997-0483  
Fax: (819) 953-4676

## Recent Background Documentation

*Global Market Opportunity Reviews*  
(Source: DFAIT)

Tel.: (613) 995-1713

Salmon, Fish and Seafood, Non-traditional  
Species, Lobster, Aquaculture.

*Country Guidelines for Canadian Fish Exporters*  
(Source: DFAIT)

Tel.: (613) 995-1713

Austria, Australia, Belgium, China, Denmark,  
Hong Kong, Germany, Italy, Mexico, the  
Netherlands, Singapore, Republic of Korea, Spain,  
Switzerland, Taiwan, United Kingdom, Egypt,  
Sweden, Russia, the Philippines, France, the Gulf  
States, United States and Japan.

Copies are available from the Department of  
Foreign Affairs and International Trade.

Contact: InfoCentre at 1-800-267-8376 or, by  
fax, (613) 996-9709.

A list of the fish and seafood publications available  
via facsimile may also be obtained through  
InfoCentre's FaxLink service, at (613) 944-4500.

## Fish and Sea Products

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Incoming Fisheries Mission from Iran	May-95	Halifax	DFAIT	613-944-7029
Fisheries Mission to Egypt/Middle East	Jul-95	Cairo	DFAIT	613-944-7029
<b>Asia-Pacific South</b>				
Canadian Food Promotion in New Zealand	Apr-95	Auckland, Wellington, Christchurch	DFAIT	613-995-7662
Incoming Salmon Mission from Australia and New Zealand	Jul-95	Vancouver	IC	613-996-1052
Canadian Food Promotion	Sep-95	Kuala Lumpur	DFAIT	613-996-5824
ASEAN Beef & Seafood Promotion (+beverages)	Mar-96	Various ASEAN Cities	DFAIT	613-996-5824
<b>Canada</b>				
Spanish Fish Buyers' Mission to Canada	Apr-95	Vancouver, Halifax	DFAIT	613-996-2147
ASEAN Food Executives Mission to Canada (also FMI)	May-95	Toronto, Montréal, Vancouver	DFAIT	613-996-5824
Incoming Chefs to Atlantic Canada	Jun-95	N.S., Nfld., P.E.I., N.B.	DFAIT	613-995-1677
Incoming Seafood Chefs/Journalists	Aug-95	B.C.	DFAIT	613-995-1677
Salmon Buyers' Mission to Canada	Oct-95	Vancouver	DFAIT	613-996-1052
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Fisheries Mission from Poland	05-Sep-95	N.B.	DFAIT	613-996-7107
<b>East Asia</b>				
Food & Beverage Promotion with Grocery Stores/Restaurants	Jan-95	Hong Kong	DFAIT	613-995-6962
Seoul Food '95	10-Apr-95	Seoul	DFAIT	613-996-7582
Seafood Promotion	Aug-95	Taichung	DFAIT	613-996-7582
Fish Buyers' Mission from Korea	Oct-95	B.C., Atlantic Provinces	DFAIT	613-995-8744
<b>Japan</b>				
Follow-up Japan Mission	Mar-95	Japan	B.C.	604-844-3156
Annual Canadian Culinary Competition	Apr-95	Tokyo	DFAIT	613-995-1677
Generic Fisheries Promotion	Apr-95	Tokyo	DFAIT	613-995-1677
Chef Seminar	Apr-95	Osaka	DFAIT	613-992-1677
Presentation by Fisheries Biologist from DFO	Apr-95	Tokyo	DFAIT	613-995-1677
Food & Consumer Products Gift Show	May-95	Tokyo	DFAIT	613-995-1677

Note: Dates and locations are subject to change.



Activity	Date	Location	Dept.	Contact
Tokyo International Seafood Show	Jun-95	Tokyo	DFAIT	613-995-1677
Solo Seafood Show & Seminar	Jun-95	Osaka, Fukuoka	DFAIT	613-995-1677
Atlantic Lobster Promotion	Oct-95	Tokyo	DFAIT	613-995-1677

### Latin America and the Caribbean

New Exporters to Mexico (NEWMEX) Mission	Apr-95	Mexico City	DFAIT	613-996-8625
Market Profile	Apr-95	Ottawa	DFAIT	613-996-8625
Solo Food Show	Oct-95	Mexico City	DFAIT	613-996-8625
ANTAD Expo '96	Feb-96	Guadalajara	DFAIT	613-996-8625
Canadian Seafood Exhibition/Buyers from Latin America	Feb-96	Miami	DFAIT	613-996-8625

### Multiple Markets

Regional Salmon Seminars	Aug-95	World/Various	DFAIT	613-995-1713
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### United States

"Agrifood and Seafood Trade Events in the U.S." - Update	Apr-95	Canada	DFAIT	613-944-9474
Fish Market in Chicago Territory - Database & Booklet	Apr-95	Chicago	DFAIT	613-944-9474
Midwest Consumer Eating Habits - Fish	Apr-95	Chicago	DFAIT	613-944-9474
Quarterly Fish Market Newsletter	Apr-95	Canada	DFAIT	613-944-9474
4-5 Non-traditional Seafood Treasures Dinners	Apr-95	Cincinnati	DFAIT	613-944-9474
Lobster Seminar/Luncheon	Apr-95	New York	DFAIT	613-944-9474
Arizona Retail Grocers	May-95	Arizona	DFAIT	613-944-9474
Incoming Aquaculture & Shellfish Buyers from Minneapolis	May-95	Atlantic Canada & B.C.	DFAIT	613-944-9474
National Restaurant Show	May-95	Chicago	DFAIT	613-996-1677
Non-traditional Seafood In-store Promotion	Jul-95	Minneapolis	DFAIT	613-944-9474
Incoming Buyers - Atlanta	Aug-95	Canada/Various	DFAIT	613-944-9474
Seafare '95	Sep-95	Los Angeles	DFAIT	613-944-9474
Seafood Buyers from California	Oct-95	Western Canada	DFAIT	613-944-9474
Solo Food Show	Oct-95	Buffalo	DFAIT	613-944-9474
Canadian Seafood Exhibition	Feb-96	Miami	DFAIT	613-944-9474
NEBS to Boston Seafood	Mar-96	Boston	DFAIT	613-944-9474
Boston Seafood Show Industry Night	Mar-96	Boston	DFAIT	617-262-3760

### Western Europe and European Union

Mussel Promotion	Apr-95	Brussels	DFAIT	613-996-2147
European Seafood Exhibition	May-95	Brussels	DFAIT	613-996-2147
Outgoing Aquaculture Mission to Denmark, Norway	Aug-95	Silkeborg, Trondheim	DFAIT	613-995-4730
Anuga	Oct-95	Cologne	P.E.I.	613-996-2147



## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

***1995/96***

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***An Integrated Plan for Trade, Investment  
and Technology Development***



**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

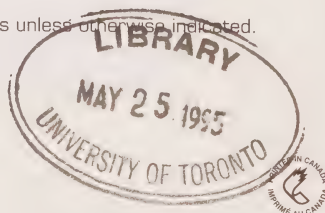
- |  |   |
|--|---|
| <p>Overview</p> <ol style="list-style-type: none"> <li>1. Advanced Manufacturing Technologies</li> <li>2. Agriculture and Food Products</li> <li>3. Aircraft and Parts</li> <li>4. Automotive</li> <li>5. Biotechnologies</li> <li>6. Business, Professional and Educational Services</li> <li>7. Chemicals, Plastics and Advanced Materials</li> <li>8. Construction Products</li> <li>9. Consumer Products               <ul style="list-style-type: none"> <li>■ Apparel and Fur</li> <li>■ Textiles</li> <li>■ Footwear</li> <li>■ Sporting Goods (including recreational watercraft)</li> <li>■ Tools, Hardware and Housewares</li> <li>■ Residential Furniture</li> <li>■ Business and Institutional Furniture</li> </ul> </li> <li>10. Cultural Industries</li> <li>11. Defence Products</li> <li>12. Environmental Equipment and Services</li> <li>13. Fish and Sea Products</li> <li>14. Forest Industries</li> </ol> | <ol style="list-style-type: none"> <li>15. Information Technologies and Telecommunications               <ul style="list-style-type: none"> <li>■ Sector Overview</li> <li>■ Computers and Peripheral Equipment</li> <li>■ Electronic Components</li> <li>■ Geomatics</li> <li>■ Instrumentation</li> <li>■ Software Products and Computer Services</li> <li>■ Telecommunications</li> </ul> </li> <li>16. Medical and Health-Care Products and Services               <ul style="list-style-type: none"> <li>■ Medical Devices</li> <li>■ Pharmaceuticals</li> <li>■ Health-Care Services</li> </ul> </li> <li>17. Minerals and Metals</li> <li>18. Oil and Gas Products and Energy Equipment</li> <li>19. Power Equipment</li> <li>20. Primary/Secondary Industrial Machinery               <ul style="list-style-type: none"> <li>■ Mining, Forestry, Pulp and Paper</li> <li>■ Agricultural Technology, Machinery and Equipment</li> <li>■ Ocean and Marine Shipboard Technology</li> </ul> </li> <li>21. Rail and Bus Equipment</li> <li>22. Space</li> <li>23. Tourism</li> </ol> |
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For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Industrie forestière.*



## Forest Industries

The forest products industry is composed of two major groups: paper and allied industries and wood industries. Wood-based building products are covered in greater detail in the Construction Products section of the International Trade Business Plan.

The paper and allied industries group is made up of two distinct segments: pulp and paper (market pulp, newsprint, fine papers) and converted paper products (packaging, coated papers, tissue products).

The wood industries group consists of three segments: commodity products (softwood and hardwood lumber and plywood, oriented strandboard, particleboard, miscellaneous panelboard products) and value-added semi-finished and finished wood products. Semi-finished products include a large range of items, including door and window stock, ladder rails, window blanks, roof/floor products, treated wood, machine stress rated (MSR) lumber, laminated products, clear, shop and fitch-type products, speciality and other custom products. Finished products include kitchen cabinets, windows, doors, manufactured housing and its various components, sidings, decking, panelling, concrete form specialities, shelving and facia.

The forest products industry is largely Canadian owned, and consists of over 4300 establishments spread across the country. In 1993, it generated \$41 billion in shipments, with exports of \$26.6 billion and imports of \$4.5 billion. This trade surplus of over \$22 billion makes it the single largest net contributor to Canada's balance of trade.

The industry is a major economic force in all regions of the country. It represents about 47 percent of manufacturing in British Columbia, 19 percent in Atlantic Canada, 15 percent in Quebec, 11 percent in the Prairie provinces and 8 percent in Ontario. In fact, the industry is the major or sole employer in about 300 Canadian communities.

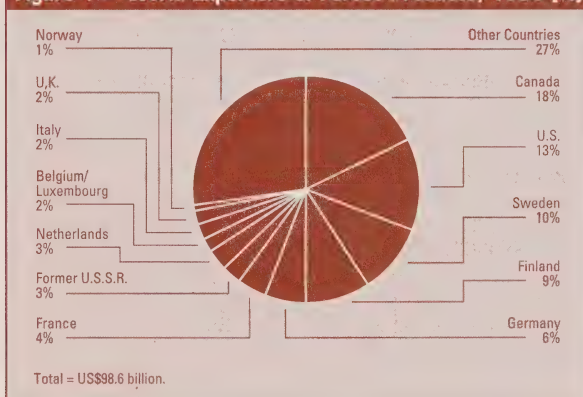
## International Environment

Canada is the world's largest exporter of manufactured forest products. In 1990, its share of the world market was 18 percent, followed by the United States at 13 percent, Sweden at 10 percent and Finland at 9 percent. The industry is heavily oriented to the production of commodities such as newsprint and softwood lumber, which account for about 80 percent of total exports. A major objective of the industry is to maintain and increase its market share globally. Another long-term objective is to accelerate the shift to add value (price/demand/acceptance) to the commodities. World data for 1990 are shown in Figure 1.

Several environmental factors have an important impact on the competitive position of the industry internationally, including:

- waste management;
- effluent emissions controls;

**Figure 1 — World Exporters of Forest Products, 1990 (%)**



Source: Food and Agriculture Organization of the United Nations, 1991 Yearbook of Forest Products, compiled by Natural Resources Canada — Canadian Forestry Services

- recycling;
- land-use policy;
- forest management practices;
- chlorine bleaching of pulp and paper;
- recycled paper content requirements in the United States;
- pulp bleaching requirements in Germany, which present important marketing challenges; some Nordic producers are particularly well-placed to meet the environmental preferences of more consumers, such as Germany, where consumer market preference is for totally chlorine-free (TCF) pulp and paper products.

Growing competition can also be expected from new competitors in non-traditional producing areas. For example:

- Brazilian, Chilean and Indonesian pulp producers are growing in importance.
- A U.S. company recently announced its intention to construct two oriented structural board (OSB) mills in Venezuela.
- New Zealand and Chile are exporting wood products.
- Domestic production is increasing in Europe.

Changes occurring in emerging markets in Eastern Europe, Mexico and South Africa offer new market opportunities. Eastern Europe, however, may over the long term create both added competition in Europe and new market opportunities for Canadian exports. The North American Free Trade Agreement (NAFTA) is expected to spell new opportunities for Canadian companies, particularly in Mexico. The preferential entry for construction lumber will not be realized until the timber frame construction building system for housing becomes better known and accepted.

## Canadian Position

In 1993, the paper and allied industries group exported shipments valued at \$14.8 billion (69 percent of total shipments), and the wood industries group exported shipments valued at \$11.9 billion (61 percent of total shipments).

The United States is Canada's most important export market and in 1993 accounted for some 70 percent of the value of export shipments. It will continue as the industry's major export market for newsprint, market pulp and softwood lumber. Market potential is linked directly to Canada's ability to compete with U.S. domestic producers, and unimpeded access to the market.

Japan and the European Union (EU) follow, accounting for roughly 12 percent and 9 percent respectively of total exports. Exports of Canadian forest products to the EU recorded a sharp decline compared to 1992. The factors involved included a severe recession in Europe and a corresponding decline in demand, currency devaluation benefiting Scandinavian competitors, and plant health restrictions on coniferous lumber.

Japan, the world's largest net importer of solid wood products, is Canada's largest single market for forest products, after the United States. The recent approval of new product standards for structural board and lumber products, acceptance in the Japanese building code of three-storey wooden buildings in prescribed areas, and the new housing initiatives by the Japanese government offer enhanced export opportunities for commodity and value-added wood products. There is scope for growth in this market during the remainder of the 1990s and into the next century.

Western Canadian offshore exports of solid wood products go primarily to the Asia-Pacific region, particularly Japan, while Eastern Canadian mills are more reliant on Western European markets.

Export opportunities are also emerging in other Pacific Rim countries, in Mexico, and in selected African countries (e.g. Algeria, South Africa) and the Middle East (e.g. Kuwait, Iran, Saudi Arabia).

## Strategic Direction

### Access Issues

The following are key issues that will be addressed by the Government in 1995-96, and some initiatives that will follow from them.

- Questions of market access remain extremely important, and have a significant impact on Canadian competitiveness and future prospects. The key issues that will be dealt with are:
  - achieving a long-term solution to the U.S.-imposed countervailing duty of 6.51 percent on softwood lumber imported from Canada;
  - harmonizing Canadian and U.S. plywood standards, CEN-Eurocodes, and JAS standards in Japan and following up on the Japanese Mutual Recognition proposal for building products;
  - ensuring that the new regulations regarding the perceived risk of pinewood nematode infestation in softwood lumber, which were introduced in the EU and in other countries such as Korea, are based on scientific fact. Co-operate and co-ordinate with U.S. associations and government agencies for mutual benefit;
  - increasing Canadian newsprint quota that enters the EU duty free;
  - increasing the Canadian softwood plywood quota that enters the EU under a GATT-bound duty-free quota;
  - addressing the discrepancy of EU duty on high-quality coated paper of 9 percent (6 percent by 1999) while equivalent tariffs into Canada are 1.5 percent to 2.5 percent;
- eliminating restrictions (e.g. higher tariffs than on comparable foreign softwoods) faced by Canadian spruce/pine/fir (SPF) lumber and plywood entering Japan;
- supporting the continuing market access work of the industry-led Co-operative Overseas Market Development Program (COMDP);
- continuing to negotiate the elimination of tariff and non-tariff barriers to forest products exports worldwide through the World Trade Organization (WTO).
- Increase customers' knowledge of Canada as a leader in developing environmentally friendly forest products based on a renewable resource and recyclable products, by:
  - developing a communication strategy to accurately portray Canadian forest management to counteract misinformation, primarily in the European market, that could seriously harm Canadian forest product exports. There is a need to monitor developments in the United States and Japan on this issue (Department of Foreign Affairs and International Trade [DFAIT], National Resources Canada-Canadian Forest Service [NRCan-CFS]);
  - supporting association offices, in conjunction with Canadian embassies and officers abroad, to factually portray Canadian forest management practices (DFAIT/missions, Industry Canada [IC], NRCan-CFS);
  - co-ordinating federal-provincial activities into a more cohesive strategy that is industry led. This will include closer co-ordination of efforts in government departments, missions abroad, the Canadian Pulp and Paper Association (CPPA) office in Brussels, the Council of Forest Industries (COFI) offices in London and Aachen, provincial offices of the B.C. government, Forest Alliance and the Canadian Council of Forest Ministers (CCFM) activities.



- Promote greater inflow of scientific and technological information from other countries by:
  - organizing outgoing and incoming technical missions, speaking tours and scientific exchanges to Europe, Scandinavia and the U.S. to address issues and explore new technical solutions in the pulp and paper sector, including converted paper products (DFAIT, IC, NRCan-CFS);
  - supporting independent organizations, such as the Canadian Standards Association (CSA) and the International Standards Organization (ISO), as potential candidates to set up a national forest management certification system to be accepted internationally to help consumers identify forest products from sustainable managed forests (CPPA, COFI).
- Improve co-ordination between industry associations (e.g. Structural Board Association, Canadian Manufactured Housing Institute, COFI, British Columbia Wood Specialities Group, Bureau de promotion des industries du bois, Canadian Wood Council, CPPA) by:
  - developing the recently formed Canadian Forest Products Export Council (CFPEC) to provide a forum for co-ordination between industry associations and programs (IC, industry associations, DFAIT, NRCan-CFS, provinces);
  - emphasizing the necessity of industry associations to disseminate product information and market intelligence and to expand export readiness training (DFAIT, IC);
  - encouraging industry associations in long-term export marketing strategies and activities, and strengthening their trade development activities through COMDP and the Co-operative Industrial Market and Development Program (CIMDP) (DFAIT, IC, provincial governments);
  - supporting the environmental issues activities of the CPPA office in Brussels (DFAIT, IC, NRCan-CFS), (provinces).
- Encourage market development by:
  - promoting the recent establishment and expanding the activities of the Forest Industries Marketing Strategy (FIMS) group to co-ordinate and assess government funding for international marketing activities by associations in this sector (DFAIT, IC, federal agencies, provincial governments);
  - supporting the process of exploring the potential integration of international marketing efforts, and rationalizing support of overseas offices through the co-ordination and execution of forest industries programs under one industry umbrella organization to offshore markets (DFAIT, IC, provincial governments);
  - developing a Canadian Building Products Export Council (CBPEC) to encourage the development of new sectoral export marketing strategies for primarily non-wood building products (IC);
  - expanding tripartite efforts, like CIMDP-Western Canada, for value-added wood products and establishing an umbrella CIMDP program in Eastern Canada to include the present separate CIMDP-proposed programs in Quebec and New Brunswick/Nova Scotia. Encourage the newly formed Wood Panel Export Market Development Program to help firms to expand and diversify markets (DFAIT, IC, provincial governments);
  - pursuing opportunities arising from the NAFTA to establish a presence in the Mexican market (DFAIT, IC).
- Expand opportunities within priority markets and promote value-added products by:
  - focussing existing market intelligence and trade development activities on priority markets such as the United States, Western Europe, Japan, other Pacific Rim countries (e.g. Taiwan, Korea, the People's Republic of China), Mexico and the Middle East (DFAIT, IC, provinces);



- building on the very high earthquake-resistant qualities of timber frame construction (TFC), in the earthquake-prone markets of the world (DFAIT/missions);
- building on key Canadian technologies and products, including TFC and related building products such as lumber, panel board, and higher value-added building products (DFAIT, IC, provinces);
- emphasizing the promotion of wood-frame demonstration housing construction to export markets, as a vehicle to increase sales of related building products and materials (DFAIT, IC);
- developing a strategy and support documentation to promote Canadian forestry and forest management systems, expertise, technology and equipment (NRCan-CFS);
- improving federal-provincial co-operation in international marketing by increasing the use of the federal-provincial Forest Industries Development Committee (FIDC) as a vehicle for dissemination of market information (DFAIT, IC, provinces);
- promoting strategic alliances with foreign investors interested in investing in Canada (DFAIT, IC, provinces);
- expanding British Columbia's "Canada Comfort Direct" marketing initiative in Japan to other provinces (BCTDC, DFAIT, IC);
- establishing building products "teams" in selected provinces to better co-ordinate federal-provincial promotional export market development activities (DFAIT, IC);
- assigning forest sector personnel at selected overseas posts to support trade policy and trade development objectives (DFAIT, IC, industry).

## Contacts

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## Forest Industries

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Saudi Build '95: Info Booth	Oct-95	Riyadh	DFAIT	613-944-5984
Saudi Buyers' Mission to BATIMAT '95	Nov-95	Paris	DFAIT	613-944-5984
<b>Canada</b>				
Manufactured Housing Buyers' Mission from Tokai	June-95	Canada/Various	DFAIT	613-995-1678
Construction Mission from Spain	Jun-95	Montréal, Toronto, Maritimes	DFAIT	613-996-7544
Building Materials Mission from Japan	Jun-95	B.C., Alberta	DFAIT	613-995-1678
Manufactured Housing Buyers' Mission from Osaka	Nov-95	Canada/Various	DFAIT	613-995-1678
Incoming Mission from Japan (post-NAHB)	Jan-96	Vancouver Area	DFAIT	613-995-1678
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Building Mission to Latvia, Estonia	Apr-95	Riga, Tallin	DFAIT	613-944-1437
<b>East Asia</b>				
Taiwan Timber-Frame Manufacturers' Mission	Apr-95	Canada/Various	DFAIT	613-943-0897
IBEX '95: Info Booth	Jun-95	Hong Kong	DFAIT	613-995-6962
Wood Products Mission	Jun-95	B.C., Alberta	DFAIT	613-995-8744
Taipei Construction/Building Materials Show: National Stand	Dec-95	Taipei	DFAIT	613-943-0897
Building South China '95: Info Booth	Mar-96	Hong Kong	DFAIT	613-995-6962
<b>Japan</b>				
Building Standards Harmonization Mission	Apr-95	Tokyo	DFAIT	613-995-1678
Canadian Building Products Exhibit	Ongoing	Japan/Various	B.C.	604-844-1952
Tokyo Good Living Show	Ongoing	Tokyo	B.C.	613-995-1678
Osaka Building Materials Show: Info Booth	May-95	Osaka	DFAIT	613-995-1678
Off-site Housing Redevelopment Product Promotion	Jun-95	Tokyo	DFAIT	613-995-1678
Aichi Housing Fair: Info Booth	Sep-95	Nagoya	DFAIT	613-996-2458
Japan Home Show: Booth & Seminar	Oct-95	Tokyo	DFAIT	613-995-1678
Prefabricated Housing Seminars	Oct-95	Japan/Various	DFAIT	613-995-1678
Regional Building Products Fairs: National Stand	Oct-95	Sapporo, Sendai	DFAIT	613-995-1678
Canadian Building Products Show	Oct-95	Nagoya	DFAIT	613-995-1678
Building Products Mission from Nagoya	Oct-95	B.C., Alberta	DFAIT	613-995-1678
Canadian Building Materials Show	Oct-95	Fukuoka	DFAIT	613-995-1678

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
Canadian Building Materials Show & Seminar	Oct-95	Osaka	DFAIT	613-995-1678
Panel Users' Mission from Japan	Feb-96	Vancouver, Calgary	DFAIT	613-995-1678
West Japan Total Living Show	Mar-96	Fukuoka	DFAIT	613-995-1678

### Latin America and the Caribbean

NEWMEX: New Exporters' Mission	05-Nov-95	Mexico	DFAIT	613-995-0460
CONSTRUEXPO: National Stand	17-Nov-95	Guadalajara	IC	613-954-3126

### Multiple Markets

WoodTech '96	Sep-96	Vancouver	B.C.	604-844-1921
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### United States

Western Red Cedar Marketing Project	Ongoing	U.S.	WED	604-666-1314
Recycled Building Products Market Seminar	May-95	Los Angeles	DFAIT	613-944-7486
Remodellers Show: National Stand	Oct-95	Atlanta	DFAIT	613-944-7486
Exploratory Mission to Atlanta	10-Oct-95	Atlanta	IC	506-851-6445
Mission from L.A. to Wood Building Products Industry (B.C.)	Dec-95	Western Canada	DFAIT	613-944-7486
NAHB Houston: National Stand	Jan-96	Houston	DFAIT	613-944-7486
Retail Lumberman's Show: Mission	Jan-96	Boston	DFAIT	613-944-7486
Market Study: Value-Added Wood Products	Sep-96	Los Angeles	DFAIT	613-944-7486

### Western Europe

Interzum '95: Info Booth and Mission	May-95	Cologne	DFAIT	613-992-7001
Atlantic Canada Wood Producers' Mission	20-May-95	Hannover	IC	902-426-9955
BATIMAT: National Stand	Nov-95	Paris	DFAIT	613-992-7001
Construction Seminars on Canadian Wood Frame Technology	Feb-96	Spain/Various	DFAIT	613-996-7544
BATIBOUW: Info Booth	Mar-96	Brussels	DFAIT	613-992-7001



## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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EXPORT STRATEGY*****The International Trade  
Business Plan*****1995/96**  

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

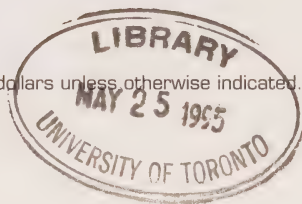
1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Sector Overview

The information technologies and telecommunications (IT&T) sector includes telecommunications products and services, computer hardware, software products, information management, computer services, electronic components, geomatics products and instrumentation. IT&T is one of the most important industrial sectors in Canada, with revenues in 1992 exceeding \$43 billion. The sector conducts 35 percent of total research and development (R&D) in Canada, and directly employs more than 320 000 people in some 13 000 firms across the country. The IT&T sector is also one of our most competitive.

The importance to Canada of exporting is well understood. Nowhere is this more evident than in the IT&T industry, where exporting is necessary not just for the prosperity, but for the survival of its firms. If Canada is to grow and prosper, this sector must develop a co-ordinated export strategy aimed not only at the United States, where 78 percent of products and services are currently shipped, but at other markets as well.

### International Environment

Currently, North America represents 47 percent of the world market, Europe 32 percent and the Asia-Pacific region 18 percent. Half of the world's population is in the Asia-Pacific region, where the use of IT&T is growing at 20 percent annually. China's economy is expected to exceed the U.S. economy in total size by the year 2015. By the same year, countries within the Association of Southeast Asian Nations (ASEAN) are expected to have 150 million people with middle-class incomes (Source: *INPUT*). Canadian firms must learn to broaden their sights. In the world at large, the IT&T market is expected to exceed \$3.2 trillion by the year 2000, building on current global base revenues of \$1.9 trillion. Canada's share is now 3 percent. By the year 2000, the IT&T sector will account for nearly \$1 of every \$6 of global gross national product (GNP) (Source: SRI International).

The IT&T sector increasingly operates in a new, more open, global trade environment, characterized by multilateral agreements and

relaxation of domestic regulations worldwide. The conclusion of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations last year is one example. Of particular importance to the sector, the new World Trade Organization (WTO) should help to curb breaches of intellectual property rights, which are particularly damaging to the software industry. The accession clause under the North American Free Trade Agreement (NAFTA) can also facilitate the inclusion of other Latin or Central American states, perhaps as early as 1996. Many trading partners in Europe, Latin America and Asia are liberalizing their investment and competition laws and regulations, particularly in the telecommunications sector. There is an increasing need for both voluntary and mandatory standards to open the global marketplace. The information infrastructure programs announced in the U.S. and elsewhere recognize and plan to capitalize on the enabling effect of information technologies and telecommunications as an engine of economic growth. Canadian companies face a strong challenge, but also unprecedented opportunities, if they are willing to venture into the global marketplace.

### Strategic Direction

In the rapidly changing global environment, the challenge for governments is to focus their activities where they will produce the greatest benefit to clients. Two types of information have been used to identify geographic priorities for trade develop-

ment over the coming year. First, eight key studies conducted over the last two years were reviewed, which identify four types of assistance required by firms, depending on their degree of export readiness. This information has been used to shape the nature of government intervention over the next year to assist exporters and would-be exporters. Second, trade data from Statistics Canada have been used to identify the countries and regions where Canada has a large volume of trade, and where the rate of growth is fastest.

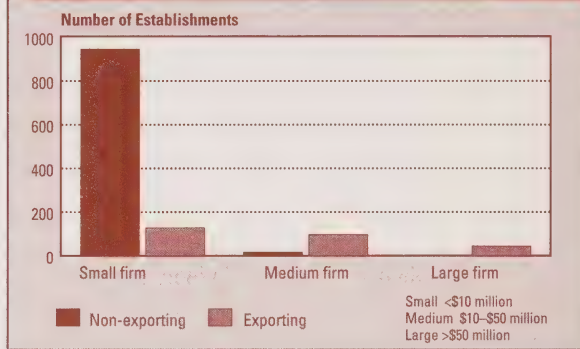
Business needs from government can be grouped under four headings: strategic market intelligence; strategic brokering; project financing facilitation; and tactical intervention. The type of assistance firms need to help them export successfully varies considerably according to the size and type of company, their geographic interests, motivation and commitment to exporting. As Figure 1 shows, all large, and nearly all medium-sized enterprises already export, while most small enterprises do not export at all. To increase the number of firms exporting, and the volume of exports, government activities will focus on helping small- and medium-sized enterprises (SMEs) that are ready to begin exporting, and those that wish to expand into new overseas markets. At the same time, government will continue to assist larger firms that require specific tactical assistance that only governments can provide.

Our analysis and consultations with the private sector and provincial governments have identified the following strategic directions for government in 1995-96. Table 1 presents the proposed federal government response. These proposed actions will not be completed in a single year, but will form a basis for continuing international business development in the coming years.

## Geographic Priorities

According to Statistics Canada, Canada's total IT&T exports rose by 76 percent between 1988 and 1993, from \$6.5 billion to \$11.4 billion.

**Figure 1 — Distribution of Exporting IT Manufacturing Establishments**

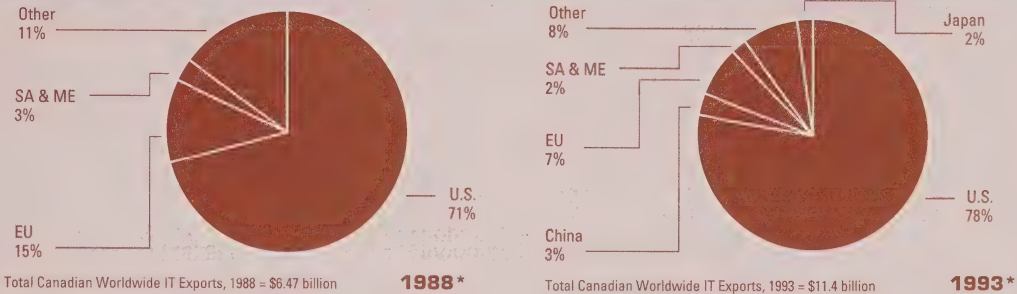


Source: Statistics Canada

Canada's customer base is also changing, as shown in Figure 2. The United States is Canada's largest market, and exports have grown proportionally more than average, from 71 percent to 78 percent of the total. Our second-largest customer, the European Union (EU), is becoming relatively less important: exports have dropped 17 percent over the last five years, from \$999.2 million to \$837.3 million. In contrast, there have been dramatic increases in exports to Japan and less traditional markets. China and Mexico have become major trading partners, followed closely by other Asian, Latin American and Eastern European nations.

Figure 3 plots the absolute size of several markets in 1993, against the growth in the proportion of Canadian exports to those countries. The chart is divided into six sectors. On the vertical axis, the dividing line is drawn at a point representing 100-percent growth over the last five years — the average for the sector. This divides the chart into above-average and below-average growth regions. Along the horizontal axis, two lines are drawn at \$50 million and \$200 million in 1993 exports. These lines divide the chart into small, medium and large markets, in terms of absolute size. A quick look at the chart will allow the reader to classify countries or geographical regions as small,

Figure 2 — Distribution of Canadian IT Exports



SA & ME = South America & Middle East

\* Includes (3351) Telecommunications Equipment, (3359) Other Communications Equipment and Electronic Equipment, (3911) Indicating, Recording and Controlling Instruments, and (3912) Other Instruments and Related Products

Source: Statistics Canada

medium or large above-average growth areas, or as small, medium or large below-average growth areas.

This analysis, supplemented by information provided by Canadian missions abroad and market research reports from the U.S. National Trade Data Bank, suggests that the geographic regions offering Canadian IT&T companies the greatest opportunity are East and Southeast Asia, Latin America and Eastern Europe. These general projections should, however, be read in conjunction with the more industry-specific information found in the subsector chapters of this report. In general, the following countries appear most attractive for IT&T:

**United States:** Canada's largest market (\$8.9 billion) remains the most attractive to all subsectors because of its size, geographic and cultural proximity, established relationships, and the continued beneficial impacts of the NAFTA. DFAIT will encourage new exporters to get their feet wet in the U.S. market by using the New Exporters to the U.S. South (NEXUS) program, will assist with trade shows and missions, and will provide tactical assistance as required.

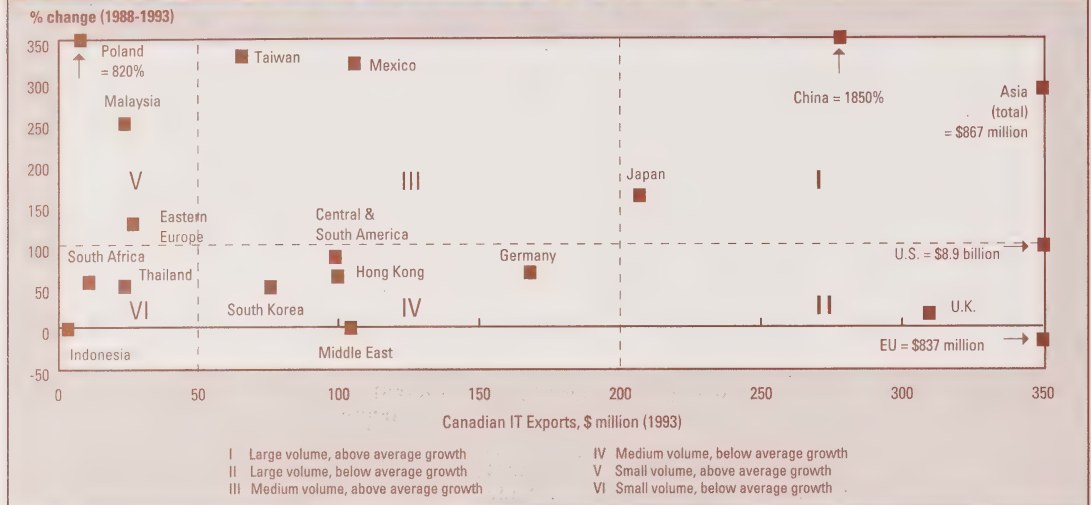
**China:** Between 1988 and 1993, China's IT&T market grew by 1850 percent to a current

total of \$277 million. Government-to-government memorandums of understanding (MOUs) have resulted in significant success for Canada. Subsequent high-profile visits, such as the November visit of the Prime Minister and Premiers, have improved Canada's profile. Commercial agreements and sales have followed, particularly in the telecommunications and components subsectors. China also has massive requirements for geomatics products and services. IFI funding is available for many projects in China.

**Japan:** Canadian exports to Japan have seen dramatic growth over the last five years, and Japan is a stronger Asian market than China for computers and peripherals, components, and software and services. Continued efforts will be made to help firms identify opportunities, to develop R&D agreements and partnering possibilities, and to provide information on how to do business in this important market.

**Mexico:** Growth continues to be strong in the Mexican market, with a 320-percent increase over the last five years. The strongest sectors are telecommunications and computers and peripherals. The NAFTA and resulting rapid liberalization are expected to produce a fast-growing market.

Figure 3 — Percentage Growth in Canadian IT Exports (1988-1993)



Source: Statistics Canada

**Taiwan:** Taiwan is approaching developed nation status, and continues to enjoy high growth rates in the overall economy and in the IT&T sector. For example, the telecom authority has aggressive infrastructure plans, with spending of US\$10 billion expected by 1997, and deregulation will produce strong opportunities in broadcasting and cable TV. Taiwan can also provide valuable experience for firms considering later expansion into the Chinese market.

**Southeast Asia, Latin America, South Africa and Eastern Europe:** These regions show strong growth, although they start from a weaker base than the nations mentioned above. All have growth rates in the hundreds or thousands over the last five years, and rapidly changing economies with the potential for expansion. Liberalization in Latin American and Southeast Asian telecommunications, the reopening of South Africa and the development of market economies in Eastern Europe all provide new opportunities. These regions are also priorities for IFI projects.

*Note:* Due to space limitations, information has been condensed. Additional information is available from the contact noted in each subsector.



**Table 1 — 1995 IT&T International Business Development Plan**

<b>Category</b>	<b>Identified Need</b>	<b>Strategic Direction</b>	<b>Responsibility</b>
Market Intelligence	Tools to locate and make global marketing information available to clients	Establish electronic directories and profiles of global information sources	Industry Canada (IC), Department of Foreign Affairs and International Trade (DFAIT)
	Sector-specific regional market intelligence	Establish geographic focus groups to assess and meet client needs; market studies; mentoring programs for new exporters	IC, DFAIT
	Timely information on agents/distributors in priority regions	Redirect efforts toward providing agent/distributor information	IC, DFAIT
	Pathfinders for sources of government programs, representatives	Develop and improve electronic directories, fax-back systems; tie to single-window initiatives; enhance federal-provincial co-ordination	IC, DFAIT, provincial governments
Strategic Brokering	Cross-cultural research to improve market penetration in priority regions	Produce "How to..." guides for Asia and Latin America on a subsector basis	IC, DFAIT
	Focussed sector strategies on a country-by-country basis; joint government/private-sector planning	Hold "Canada only" sector-specific events as part of development assistance (e.g. rural telecom seminars)	IC, CIDA Inc.
	Expanded private-sector participation in training and development agencies	Expand Telecommunications Executive Management Institute of Canada (TEMIC) recruitment activities; extend to broader range of IT&T sector training	IC, Canadian International Development Agency (CIDA), DFAIT
	Identification of technology in applications required targeted regions and potential partners	Undertake specific market studies and analysis; provide information to companies	IC, DFAIT
Project Financing Facilitation	Improved access to international financial institutions (IFIs)	Provide ready access to IFI information, assessments of IFI projects that are realistic targets for Canadian suppliers/subsuppliers	IC, DFAIT
		Assist in consortium building, identifying and developing suppliers for the IFI market	IC, DFAIT



Category	Identified Need	Strategic Direction	Responsibility
Tactical Interventions	Government-to-government relationships with selected countries	Develop bilateral accords, memorandums of understanding, R&D agreements	IC, DFAIT
	Systematic tracking of new Canadian technology developments, information to missions in target markets	Co-ordinate with agendas of other Canadian trade promotion organizations and missions abroad; develop information sources	IC, DFAIT
	Canadian access to markets through standards work	Participate in standards forums; facilitate access to standards databases; enable mutual recognition agreements	IC, DFAIT
	High-level lobbying efforts by executives	Develop a tracking system for high-level interventions; provide link to contact and project opportunities database	IC, DFAIT

## Computers and Peripheral Equipment

The computer and peripheral equipment industry is a grouping of companies that manufacture electronic products used in various computing applications. Two important classification criteria to be used in this determination are: a) the product must be designed to be integrated within a computer expansion slot; and b) the product must be distributed through computer wholesale or retail channels. Unfortunately, several countries, including Canada, are finding the task of classifying computer goods within the appropriate industrial and harmonized trade classification code increasingly challenging. Much of this difficulty is brought about by the rapid technological convergence of analog and digital processing equipment. Computer technology is converging with the consumer electronic industry (household computers, monitors, HDTV, CD-ROM, and electronic games) and the telecommunications equipment industry. This transition is a natural one, and reflects the evolution of the analog telecommunications industry into a large distributed digital computer network. To respond to these issues, Industry Canada (IC), in partnership with other federal and international departments, will strive to ensure further harmonization and conformance with international trade and industrial classification systems. However, for the purpose of this report, computer and peripheral equipment constitutes the following:

- **Electronic computers** include super-computers, mainframes, mid-ranges, minis, personal computers (PCs), work stations, laptops and others.
- **Peripheral equipment** interfaces with or plugs into computers via a parallel or serial cable, and is often referred to as input-output devices. Peripherals include printers, plotters, joysticks, mouse, and desktop and handheld scanners.
- **Computer storage equipment** usually includes devices that store digital bits of information data whether or not the power is on. Secondary memory products include hard drives, floppy drives, optical disk drives and larger storage (disk arrays) subsystems.
- **Loaded computer processor boards** are fully populated and unpackaged computer subsystems that snap into mainframe, mid-range, PC, and work station expansion slots located on the motherboard. These are usually application specific, and include computer motherboards, video boards, audio boards, process controller boards, local area network (LAN) interface boards (Ethernet, Token, FDDI, mainframe emulation), telecommunication network interface boards (fax, ISDN), and other peripheral performance-enhancing boards (SCSI).
- **Computer terminals** are a hybrid between an output device and a work station. Within this environment, the terminal acts as both a display and an input device. Data processing is usually located on a remote computer, with complex video generation and communication processing allocated to the terminal. The most prominent distinction between a computer and a terminal is the latter's lack of a CPU microprocessor.

In an effort to provide some international context for Canadian production and international trade patterns, this report refers to several public and private sources of statistics and research. Readers should note that inconsistencies between figures and charts may appear, but are largely due to methodological and definitional differences between data sources. The specific deviations range from differences in product classifications and sampling techniques, to real-life categorization constraints, such as the distinction between

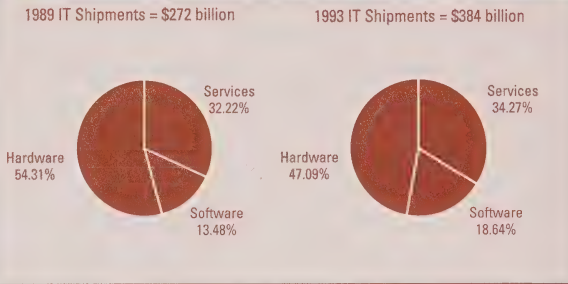
company classification versus establishment classification. A notable example of the latter is the treatment of IBM Canada. Although the largest producer of computer equipment parts in the country, it is currently considered a computer software and services company. Its manufacturing production is included within Canadian production and trade statistics; however, the financial statistics are not included in the computer and peripheral equipment industry foreign ownership analysis.

## International Environment

Over the last two decades, the international information technology (IT) industry has grown considerably. Even over the last recessionary period, International Data Corporation (IDC) estimates that the IT industry, which encompasses computer services, software and hardware, has grown from \$272 billion in 1989 to over \$384 billion in 1993. However, as Figure 1 indicates, the software and hardware composition of the market pie has changed.

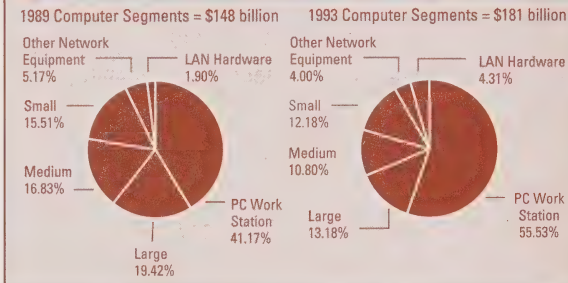
Although computer hardware revenues may be diminishing as a share of this growing industry, it is important to note that unit shipments are growing much more quickly than revenues, a trend that can largely be attributed to three factors. First, large and expensive mainframe revenues are quickly shrinking due to their proprietary nature — users are demanding increased openness between competing systems, and access to a wider selection of software programs. Second, the rapidly increasing performance of PCs and Reduced Instruction Set (RISC) work stations offers very high performance value that not only rivals but has surpassed that of larger system vendors. However, the greatest impact on revenues has been the dramatic shift in the industry's operating margins. A decade ago, large computer system vendors were few in number and hence benefited from near monopoly profit margins. While unit shipments of PC work stations have never been

**Figure 1 — Major Worldwide IT Segments**



Source: International Data Corporation

**Figure 2 — World Computer Hardware Revenues**



Source: International Data Corporation

higher, the entry of a large number of competitors has led to much narrower profit margins. As Figure 2 demonstrates, even over the past five years demand has shifted steadily from mainframe (large) and mid-range (medium) to work station and PC, as well as LAN equipment.

The above trends are also evident in unit shipments. Between 1989 and 1993, annual mainframe shipments shrunk from 4142 units to 2423 units (approximately a 10-percent decrease in annual growth), while shipments of medium-sized mainframes decreased from 56 390 to 31 895 units (approximately an 11-percent decrease in annual growth). However, these negative trends have been more than offset by

the phenomenal growth of work station and PC unit shipments, which almost doubled, from 21.4 million units in 1989 to 36.7 million in 1993 (approximately 17-percent annual growth).

While PC and work station unit shipments have averaged approximately 17.8-percent annual growth over the last four years, annual revenue increases over the same period have averaged 16.2 percent. Therefore the average shipment price per unit has decreased slightly, while over the same period of time, performance has increased substantially. In terms of the future growth prospects for the industry, Dataquest forecasts that the compounded annual growth rate for all segments of the industry from 1993, up to and including 1998, will be 5.7 percent. Industry Canada expects that the increasing performance of PCs and work stations, as well as the growing proliferation and flexibility of computer networking equipment, will continue the shift toward smaller, but more powerful systems. While the classification methodology between IDC and Dataquest differs somewhat, the Dataquest data-processing equipment forecast is indicative of the future international trend of the industry.

Many of these structural shifts will further benefit Canada's growing PC/work station-related equipment manufacturers. A review of a small

sample of international computer firms (see Table 1) demonstrates that those firms offering small-scale systems (work stations and PCs) have been profitable over the last several years. It is the monolithic computer companies such as IBM, Digital, Amdhal, and Groupe Bull with their portfolio of large-scale systems that have splashed red ink over the financial performance of the industry as a whole. Conversely, many opportunities will present themselves to nimbler and more innovative Canadian small- and medium-sized enterprises (SMEs) that demonstrate technological excellence and develop products for the rapidly growing PC/work station market.

Within the computer industry, technology has always played an important role. It was not long ago that computers were primarily the domain of large corporations. Direct marketing was carried out by these firms and was mostly aimed at coveted key buyers within large Canadian companies as well as multinational enterprises (MNEs). However, with the shift away from mainframes and the rapidly increasing competitiveness of PCs and work stations, high growth markets are now found within the ranks of private consumers, small businesses, and large businesses as they convert to more user-friendly client-server systems. The move toward inexpensive microprocessor

**Table 1 — Sample of Mainframe and PV/Work Station Vendor Worldwide Revenue and Net Income Before Taxes (US\$ million)**

Name	1988		1989		1990		1991		1992		1993	
	Rev.	NIBT	Rev.	NIBT	Rev.	NIBT	Rev.	NIBT	Rev.	NIBT	Rev.	NIBT
Apple	4 071	656	5284	744	5 558	779	6 309	450	7 087	140	7 977	140
Compaq	2 100	367	2876	485	3 599	641	3 271	154	4 100	295	7 191	616
HP	9 831	1 142	11 899	1 151	13 500	1 162	14 494	1 127	16 427	1 325	20 317	1 177
Dell	258	21	389	8	546	44	890	73	2 014	143	2 873	(39)
Sun	1 052	111	1 765	78	2 646	124	3 221	284	3 628	173	4 309	224
Amdhal	1802	361	2 101	255	2 159	307	1 702	7	2 525	(14)	1 681	(714)
Digital	11 475	1 741	12 742	1 421	12 943	74	13 911	(617)	14 027	(3)	14 371	(251)
IBM	59 700	9 033	62 710	6 645	69 018	10 203	64 792	121	64 523	(9 026)	62 716	(8 797)
Bull	N/A	N/A	5 124	(28)	6 406	(1 383)	5 930	(587)	5 706	(871)	4 989	(855)

Source: International Data Corporation



hardware has imposed new economic realities on the computer industry, and is causing some fundamental restructuring as manufacturers adjust their costs to high-volume, lower margin production. The desktop-computer boom has, in turn, sparked another trend: the rise of computer networks, which enable hundreds of disparate machines to be efficiently linked and allow the same program to be run on more than one computer system.

Still, there are untold changes to come as new technological advances open up new markets. Multimedia applications, mobile computing and sophisticated work stations will fuel the rapidly growing small business, household, school and government segments. The most noteworthy of these applications will be images and voice-intensive applications; co-operative working between terminals at remote locations; and the intra-corporate transmission of high volumes of information at speeds barely conceivable today. Signs of the convergence of computers, consumer electronics and telecommunications have been apparent for some time, but the results will embrace new areas such as broadcasting, HDTV and image-intensive Internet applications. For household consumers, Canada's telephone companies will be pursuing further investments in switching and transmission (fibre, copper) technologies in order to provide ever-increasing bandwidth on demand for small businesses, households and large corporations. One such enhanced service to be rolled out in the near future will be an Integrated Services Digital Network (ISDN) for high-speed, high-quality digital transmission.

Figure 3 provides an overview of international computer markets. Compiled by the U.S. federal government, it is useful for assessing the relative size of the Canadian market vis-à-vis other countries, as well as the dominance of certain key industrialized countries. The data should assist companies in understanding the importance and size of the U.S. computer market, and should suggest which countries rely most on imports, and

**Figure 3 — 1993 Foreign Computer Markets**



Source: U.S. Department of Commerce, International Trade Administration



which geographic regions may hold the greatest potential. Future analysis will assess the computer intensity of each country by devising a per-capita measure of computer investments.

## Canadian Position

In Canada, the establishments in this industry range from small operations with fewer than 10 employees to large manufacturing operations with more than 2500 employees. Their facilities and operations are varied, from minimal assembly and sales organizations to ones with complete research and development (R&D) and manufacturing capabilities and international sales and service offices. In 1993, of the 390 companies claiming a majority of their output to be products relating to computer equipment, five were large branch operations of foreign-owned MNEs. The remainder were smaller Canadian-owned enterprises that generally specialize in computer assembly, computer subsystem manufacture and peripheral equipment. Approximately 200 of these companies employ over 15 employees.

The computer industry is concentrated primarily within Ontario (70 percent of shipments) and Quebec (20 percent of shipments), with a small but growing number of operations

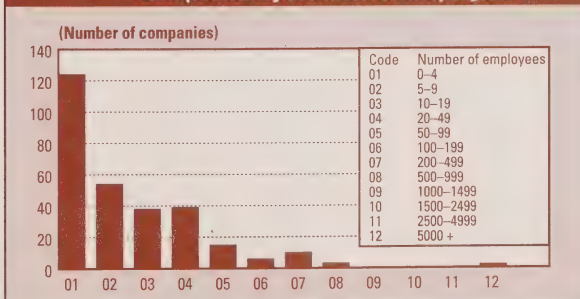
developing in British Columbia. Further economic contributions are also made by the wholesale and resale channels, which employ roughly 45 000 Canadians. The industry experienced positive and negative cyclical fluctuations between 1988 and 1992. Employment hovered between 12 000 and 12 500 employees, while domestic shipments over the period grew from \$1.5 billion to \$3.4 billion.

The Canadian subsidiaries of a half dozen large MNEs account for the majority of shipments and employees. As an indication of the contribution of these MNEs to the total manufacturing capacity of the Canadian computer industry, in 1991 computer MNEs held 25 percent of assets, generated 65 percent of revenues, and employed roughly 59 percent of the total computer industry labour force. The Canadian economy benefits from the presence of several computer MNEs, including IBM, Digital, Hewlett Packard and Unisys. However, for reasons explained earlier, it is important to note that IBM's manufacturing establishments are not included in the data in Figure 4.

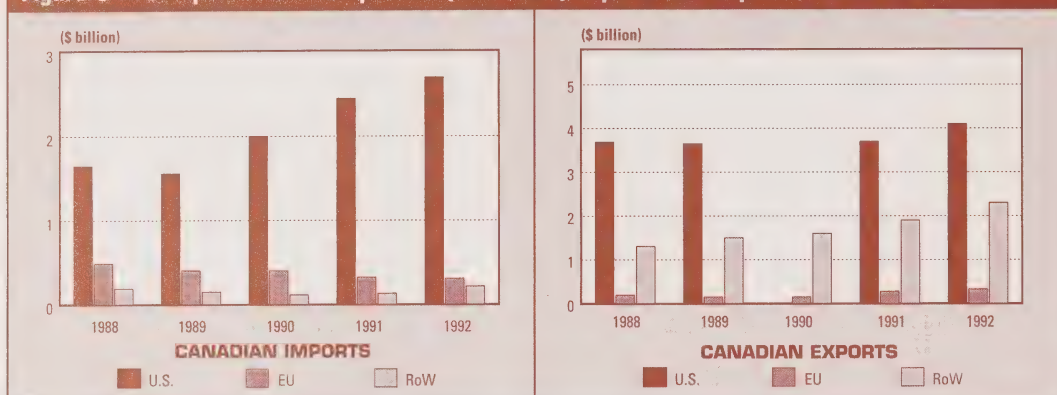
In this environment, Canadian computer equipment manufacturers have been able to develop either niche or high-volume international markets for their products. In terms of international sales, some of the most notable Canadian SMEs include Advanced Gravis, ATI Technologies, Corresco, DIPIX, Dynapro, Eicon, Epic Data, Matrox, Merit and Widecom. Other SMEs have had greater success domestically and limited success in other markets.

Like the rest of Canada's trade picture, the bulk of our two-way trade in computer equipment is with the United States. Unlike other sectors, however, this is not only due to the proximity and size of the U.S. market, but also shows that our trade agreements do benefit Canadian producers. Conversely, the huge trade imbalance between imports and demand with Japan suggests that it has a relatively closed market. Overall, Canada has a large and growing trade deficit in the computer equipment sector, as shown by Figure 5.

**Figure 4 — Distribution of Canadian Computer Companies by Number of Employees**



Source: Statistics Canada

**Figure 5 — Computers and Peripherals (SIC 3361) Imports and Exports, 1988-1992**

Source: Statistics Canada

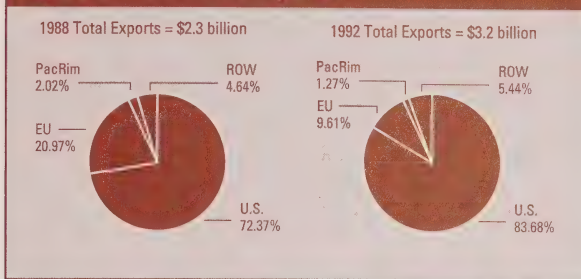
It is important to note, however, that very few countries in the world, including the United States, have a positive trade balance in computers. However, even setting aside the theoretical question of what constitutes a reasonable trade balance given the absolute size of the domestic computer market, it is disconcerting to witness our increasing deficit position. Also surprising is the rapidity with which Asia has developed into a major exporting bloc and penetrated the Canadian market, given the U.S. tariff preference combined with the narrow margins typical of many Asian computer goods.

Canada's computer equipment industry has demonstrated international competitiveness in PC/work station cards and peripherals, the market segment that is experiencing the greatest growth and has the strongest future potential. It is within this environment that smaller Canadian high-tech firms must plan and carefully execute costly international marketing campaigns, undertake risky but critical R&D projects, and try to influence international standards to maximize the return of earlier R&D efforts.

The Canadian computer industry also benefits from the presence of subsidiaries of MNEs. Some of these have clearly defined roles that do not

necessarily include international markets, but are restricted to North American mandates or supplier status within the parent organization. However, a few of Canada's MNEs do have world product mandates. These are often provided with considerable autonomy in the development, marketing and manufacturing of their products. Coupled with this new autonomy, however, is the new reality that losses will not be subsidized indefinitely nor allowed to accumulate and tarnish overall corporate earnings. In these cases, Canadian subsidiaries of MNEs with world product mandates are almost indistinguishable from other indigenous Canadian computer companies.

To a certain degree, the supply and demand for computers is geographically driven. Europe, Asia and North America have all developed either indigenous or subsidiary computer assembly operations. This trend can be largely attributed to General Agreement on Tariffs and Trade (GATT), European Union (EU) and North American Free Trade Agreement (NAFTA) tariff rules that are predicated on the concept of substantial transformation, as well as higher transportation cost differentials between subassemblies and finished computer systems. In North America, for example, the NAFTA signatory nations may not act as a

**Figure 6 — Canadian Exports**

Source: Statistics Canada

backdoor entry for offshore suppliers; rather, companies are required to demonstrate substantial transformation in order to trade inter-regionally. The lower volume taken up for smaller components or subassemblies also significantly reduces the variable per-unit transportation cost of Canadian computer board products. Therefore, Canadian computer firms that design and manufacture differentiated computers, subsystem cards and peripheral equipment are more likely to succeed offshore than Canadian firms or MNE subsidiaries primarily engaged in the assembly of computers.

Figure 6 provides an illustration of the changing geographical market for Canada's computer equipment exports, and underlines our increasing reliance on the U.S. market. Although these data cannot be used as the sole indicator of Canada's industrial competitiveness, the increasing percentage of sales going to the United States shows that Canadian products are competitive in the world's most demanding market. Figure 6 also shows that there may be significant further opportunities for growth in offshore markets. Indeed, given Canada's relative competitiveness in the U.S. market, it is somewhat surprising that we do not perform better elsewhere, perhaps because Canadian firms focus almost exclusively on the U.S. market.

In the next year, several potential impediments and industry structure issues will be explored to

help Canadians understand why our exports are so strongly concentrated in the United States. Possible factors range from the proportion of international trade originating from subsidiaries of MNEs and the extent to which these enterprises have mandates to supply the local, North American or international marketplace, to the slowness of indigenous Canadian computer firms to explore offshore markets once success has been achieved in the United States. Although these and other factors play a role, we cannot yet be certain about their importance relative to other factors. Nonetheless, early quantitative analysis, combined with input from IC's ongoing consultation with the computer industry, suggests that Canadian companies lack information about some of these markets. As a result, there is a natural tendency to devote more marketing resources toward the United States, where information about trade regulations, consumer interest, pricing practices, distribution channels, competing products, and market size is readily available. Sources of information on the U.S. market abound because of its proximity, commonality of language and culture, the benefits of the NAFTA, and general and specific sources of market information from North American trade journals, product magazines and broadcast media.

In economic terms, it is generally assumed that information on potential markets is uniform, and that companies will optimize their international marketing investments to generate the highest positive return. Therefore, Canadian computer companies should shift the destination of marketing resources to other international markets when an additional dollar spent on marketing in another market begins to generate a higher return than the same incremental investment in the United States. However, consultation with industry shows that information is not as readily available for offshore markets as for the U.S. market. To address this problem, IC and the Department of Foreign Affairs and International Trade (DFAIT), in collaboration with the private sector, will focus resources on acquiring and providing to Canadian developers more information on offshore markets.

**Table 2 — Key Computer Export Markets**

	1993 Total Market (US\$ billion)	TM Growth 94-95 %	1993 Import Market (US\$ billion)	1993 Cdn. Exports (US\$ million)	IM Growth 94-95 %	LC <sup>a</sup>	FC <sup>b</sup>	Market Barriers <sup>c</sup>	Import Receptivity <sup>d</sup>
<i>Asia</i>									
Taiwan	4.9	17	2.0	9.6	15	3.5	5	3.5	3.5
Hong Kong	1.4	10	3.8	10.0	8	4	3	5	4
<i>Europe</i>									
Germany	27.0	8	26.0	83.9	15	4	2	5	5
U.K.	14.0	5	12.0	84.1	5	3	3	5	3
France	11.0	6	5.5	26.4	4	3	1	4	5
<i>Latin America</i>									
Mexico	1.1	25	1.0	24.6	25	4	4	4	4

In the following scales, 1 is the poorest score for foreign exporters to the particular market, and 5 is the best score.

<sup>a</sup> LC — a 1-to-5 index score of degree of local competition

<sup>b</sup> FC — a 1-to-5 index score of degree of foreign competition

<sup>c</sup> a 1-to-5 index score of degree of market barriers

<sup>d</sup> a 1-to-5 index score of degree of receptivity of imports

Source: U.S. Department of Commerce

There is no intention to try to persuade Canadian companies to allocate resources to non-U.S. markets, but rather to provide reasonable access to other international market information that can be incorporated into their decision-making processes.

The majority of small companies will likely continue to follow the natural optimization path for product and market development, beginning with the domestic market, and gradually moving outward to the United States, and eventually to other offshore markets, since this approach is likely to bring the greatest returns. However, depending on the nature of the product and firm, the initial benefit resulting from Canada's proximity to the U.S. market may become a disadvantage if market information of similar quality and quantity is not available for other markets. Companies may not be aware that they are overlooking greater possible returns for the same marketing investment in other markets.

## Strategic Direction

- In most instances, the federal government will continue to encourage and help small Canadian computer companies to develop their first export market in the United States, by providing market information and key regional contacts. Once companies have demonstrated reasonable product and marketing success there, IC and DFAIT will assist by providing them with sector-specific information on selected foreign markets. DFAIT and IC can also help companies to organize and plan an investigatory trip abroad.
- In order to maximize available resources, as well as the value of foreign market information, IC and DFAIT, in consultation with industry, have identified key computer markets in each geographic and economic trading bloc. Criteria used to assess potential entry points include: the size of the total and import PC/work station computer markets; import receptivity



conditions; local competition; market barriers; and available DFAIT resources. The countries chosen are shown in Table 2.

- For the countries identified, IC and DFAIT will collaborate to develop and make available geographic and sector-specific market analyses tailored to the PC/work station orientation of the Canadian computer industry. Although coverage of international computer markets will be selective, the strategy will assume that familiarity and success in key priority markets will lead to greater knowledge and familiarity with consumers and distribution channels for the rest of the geographic area. Efforts will be made to assess market conditions and relate them to Canadian capabilities.

IC and DFAIT will collaborate annually on the following:

- analysis of the quality of international trade Harmonized System (HS) and standard industrial classification (SIC) data (IC);
- analysis of the capabilities and competitiveness of the domestic computer equipment industry (IC);
- analysis of the international trade contribution of MNEs and SMEs (IC);
- analysis of foreign market trade penetration (IC, DFAIT);
- sector-specific foreign market analysis (IC, DFAIT/missions);
- foreign technology partnering opportunities and brokering (DFAIT, IC);
- integration of federal trade programs with sector capabilities and foreign market opportunities.

Greater emphasis will also be placed on providing Canadian companies with information on foreign market opportunities, and the value-added services they present. To measure progress, emphasis will be placed on regular monitoring of sectoral trade flows rather than trying to evaluate the successes of individual firms' investigatory missions. Industry can contribute to this plan,

and hence help other small Canadian companies, by providing intelligence to foreign missions with respect to the calibre and capabilities of different foreign trade shows, distribution channels and agents.

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## Electronic Components

**E**lectronic components include printed circuit boards (PCBs), connectors, capacitors, resistors, switches, relays, transformers, semiconductors and a number of other electronic devices.

Components are commonly thought of as being either active or passive in nature. Electron tubes, integrated circuits and transistors are examples of active devices, while capacitors, resistors, connectors, relays, transformers and PCBs are considered passive devices.

This dynamic export-oriented subsector comprises approximately 300 companies and employs some 12 000 people. Canadian production stands at about \$3.13 billion, of which approximately 80 percent is exported.

Canada currently imports about \$5.5-billion worth of electronic components, 85 percent of which comes from the United States. Other suppliers include Japan, Korea, Taiwan, Hong Kong, China and Germany.

Electronic components are the basic building blocks of the electronics industry. Virtually all original equipment manufacturer (OEM) equipment contains a mix of active and passive components. The demand for components is dependent on sales to such markets as telecommunications, computers, consumer electronics, and defence, automotive and medical products. The main customers of Canadian manufacturers are telecommunications and computer companies.

### International Environment

Canada is extremely successful in the higher-end electronic components industry worldwide. Canada faces fierce competition from many countries, especially the United States and Japan, in the area of technologically sophisticated products. North American firms often lead in the introduction of new products, but Japan and recently Korea have been able to refine the process and can now produce in large volumes at less cost. With less sophisticated products, Canada cannot

compete effectively with such countries as Mexico, China, Singapore, Korea and Taiwan.

The United States is Canada's largest export market for electronic components. Trade is concentrated in seven product areas: PCBs, semiconductors, capacitors, resistors, switches, connectors and magnetics. PCBs and semiconductors account for the bulk of this trade.

The electronic components industry is expected to expand by about 9 percent in 1994. This expansion will be fuelled mainly by the computer, communications equipment, consumer electronics and automotive sectors. Today's customers demand products that offer higher performance, greater reliability and continued miniaturization at less cost. Worldwide buying patterns for components are based on technological superiority, cost, delivery and reliability. A number of variables exist in production costs, including labour, material, capital and regulatory enforcement costs for worker safety and environmental issues. Canadian manufacturers must pay close attention to these variables to remain competitive in the global market.

### Canadian Position

Canadian strengths in electronic components are centred in the following areas:

#### Printed Circuit Boards

Printed circuit boards provide the interconnect link and the physical platform for most OEM products. When electronic components are mounted on boards, they become electronic assemblies that are the building blocks for electronic products. The functionality of every electronic product depends upon the design of the PCB. In recent years, PCBs have become more

important because of the emphasis placed on miniaturization in the packaging of components. A strong relationship exists among PCB material suppliers, equipment vendors, design engineers and OEMs. The fostering of a strong PCB sector is paramount to the competitiveness of all electronic equipment manufacturers.

In Canada, PCBs are produced by approximately 40 independent manufacturers. The top five supply over 80 percent of the market, with 1993 sales of about \$380 million.

The United States has approximately 700 independent manufacturers. The Institute of Interconnecting and Packaging Electronic Circuits (IPC) estimated PCB sales at \$5.9 billion in 1993. According to IPC, in 1979, OEMs were responsible for 60 percent of production, while independent PCB vendors accounted for 40 percent. By 1993, a record high 69 percent of total production originated from independent producers, while OEMs accounted for only 31 percent.

Many OEMs have discontinued their PCB lines in the past few years as equipment costs have risen sharply. Traditionally, most R&D in the PCB business has been done by the captive board producers and PCB equipment manufacturers. Independent manufacturers have relied on the trickle-down effect for their product and process improvements. As many OEMs have discontinued their PCB lines, R&D must be picked up by the independents and the equipment manufacturers. This is a new role for the independents, and the effect is being felt in Canada.

PCB manufacturers will play a significant role in the development of multichip modules (MCMs) using laminate substrate. The MCM-L has advantages over other types of MCMs (Cs and Ds) because of its lower production cost and generally shorter delivery times.

Surface-mount PCBs are growing rapidly in the world marketplace. IPC estimates that 64 percent of the boards produced in the United States in 1993 were for surface-mount applications, compared to only 2 percent in 1984.

In industry assessments performed by Industry Canada (IC), Canadian manufacturers compared favourably with the U.S. competition. However, Canadian manufacturers face major foreign competition because their costs are higher than those in other industrialized countries. The cost differential is mainly related to higher wages, and safety and environmental standards.

Domestic exports of PCBs in 1993 were more than \$520 million, and imports were over \$723 million.

## Semiconductors

Semiconductor devices are incorporated not only in traditional electronics equipment, but also in an increasingly wide range of applications, from simple consumer products to sophisticated industrial systems. Advances in enabling technologies such as information technology and biotechnology are critically dependent on advances in semiconductors.

The Canadian semiconductor industry constitutes a very small portion of the global semiconductor industry, estimated to be worth about US\$65 billion in 1993. The development and growth of the Canadian industry was spurred by the growth of Canada's communications industry. A large portion of semiconductor production is destined for the in-house use of two vertically integrated telecommunications equipment companies: Northern Telecom and MITEL Corporation. Northern Telecom's microelectronics operations supply the in-house needs of its parent and subsidiary companies, while MITEL's production is for both internal use and commercial markets. Gennum Corporation operates the only bipolar silicon fabrication facility in Canada. With the exception of these companies, the Canadian semiconductor industry is composed of approximately 30 smaller companies specializing in niche products or design and test services.

Domestic exports of semiconductors in 1993 were \$1.8 billion, and imports were \$4.4 billion.

## Capacitors

In electronic applications, capacitors are used for filtering, coupling, isolating, tuning and storing electrical energy. Current trends in the capacitor industry are toward surface-mount components and miniaturization of the complete electronic capacitor product line. According to *Electronic Components* magazine, the smallest-size chip capacitor currently being mass-produced is 1.6 mm by 0.8 mm, and the next generation of chips will be about 50 percent smaller.

Chip capacitors are generally priced higher than the leaded versions. However, most new OEM designs call for surface-mount devices, and the unit price is decreasing as manufacturing volumes increase. Major applications for chip capacitors include telephones, computers, video-cameras, televisions and automotive products. In 1993, domestic exports of capacitors were \$20 million, while imports were \$138 million.

## Resistors

Resistor products display electrical resistance, and are used in an electrical circuit for protection, operation or current control. As with most electronic components, the trend is also toward surface-mount components. Japanese and Korean companies appear to have a significant lead on other countries in this product area. Several Canadian companies are very active in thick film resistor networks.

In 1993, domestic exports of resistor products totalled over \$8 million, and imports were \$81 million.

## Connectors

Connectors include electrical apparatus for switching or protecting electrical circuits, or for making connections to or within electrical circuits for a voltage not exceeding 1000 volts. Examples of connectors include switches, relays, fuses, surge suppressers, plugs, sockets, lamp-holders and junction boxes.

Connectors create the electrical junction or interconnection in virtually all electronic products. The trends toward surface-mounting and miniaturization across the entire product line are rapidly taking place in the field of connectors.

Connectors are a strong niche area for Canadian manufacturers. They are expected to be a growth area, with strong prospects in fibre-optic connectors, followed by printed-circuit and special-purpose connectors.

According to Technology Forecasters, a market research firm, the North American connector market should continue to grow by an average of 5 percent annually over the next few years.

In 1993, domestic exports of connectors were \$325 million, and imports were over \$1 billion.

## Magnetics

This category covers electrical transformers, static converters and inductors. Canadian manufacturers supply many of these products, and many specialize in power supplies for computers, telecommunications equipment and various other OEM products. Several Canadian companies have made significant advances in switch-mode supplies, and are exporting much of their product.

In 1993, domestic exports were \$388 million, and imports were \$565 million.

## Strategic Direction

The electronic components industry is expected to expand at an annual rate of 7 to 10 percent through the mid- and late 1990s. The continued expansion will be fuelled by the rising demand for communications equipment, computers, consumer electronics, and medical, environmental and automotive products. Components suppliers will have to closely monitor the complexity of the packaging and the interconnection needs of the new OEM products to anticipate the changes that may be required for their own products.

Establishing close working relationships between components suppliers and users will be critical if Canadian companies are to remain competitive in world markets.

- Participation at trade shows and in missions continues to help companies maintain a competitive position in the supply of products and services.
- In 1993, IC visited a cross section of Canadian microelectronics companies to identify the countries with which they would like to develop export sales and alliances. The companies also identified a number of trade shows of interest. The countries mentioned include India, Japan, China, Thailand, Mexico, Germany and the United States. The trade shows included Comdex, Nepcon West, Semicon West, CeBIT, Electronica, Composant and WESCON.

- IC and the Information Technology Association of Canada (ITAC) have signed a funding agreement for the delivery of an innovative set of supplier development services. ITAC has established a program office and retained staff to approve projects and manage this agreement. Program services include:

- information gathering on second-tier suppliers;
- information gathering on other types of available assistance programs;
- regional networking events;
- operational assessment services;
- partnership assistance services.

For additional information, contact ITAC at:  
Tel.: (613) 599-4233  
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- The Strategic Microelectronics Consortium (SMC) is a not-for-profit corporation established to help the Canadian microelectronics industry achieve sales of more than \$1 billion by the year 2001. The SMC strives to present a unified voice for the microelectronics industry in Canada. Member companies undertake to

define their technologies and capabilities in such a way that they can be applied to the creation or innovation of products and/or processes that have immediate or mid-term capacity for generating revenue.

SMC has five microelectronics program categories under development:

- low-power projects;
- high-density packaging;
- video and multimedia;
- general microelectronics;
- quality improvements.

For additional information, contact SMC at:  
Tel.: (613) 592-8155  
Fax: (613) 592-2093

### **Geographic Priorities**

The Canadian Position section of this report identifies six product areas, which together amounted to over \$3.13 billion of domestic exports. The country of destination for over 85 percent of electronic components domestic exports is the United States, while the remaining 15 percent go to such countries as Taiwan, Japan, Hong Kong, Korea, Malaysia, Germany, the United Kingdom, France, Italy and Mexico. These are expected to continue to be Canada's largest markets.

The Mexican market for telecommunications, computers and consumer electronics products is growing rapidly. Private and foreign investors are expected to invest over \$30 billion in Mexico, installing new telecommunications and computer systems.

This will increase Mexican demand for PCBs, semiconductors, cathode-ray tubes, transformers, connectors, power supplies and capacitors. Canadian suppliers are well positioned to fill this need.

Canadian component suppliers will benefit from the implementation of the North American Free Trade Agreement (NAFTA), as it provides for preferential tariff treatment for all "originating"



North American goods traded among Canada, the United States and Mexico. Rules of origin are used to determine whether a product qualifies as a good originating in North America. These rules ensure that NAFTA benefits are only available for goods substantively produced in North America.

The NAFTA rules of origin for telecommunications equipment established the following requirements:

- Each non-North American input must undergo sufficient transformation during production in one or more of the NAFTA countries to result in a specific change in tariff classification.
- For most telecommunications goods, there is an additional condition relating to the number of non-North American printed circuit assemblies permitted to be used.
- For a few telecommunications goods using specific non-North American parts, the manufacturer is required to meet a value-content test.

The rules of origin should ensure that more electronic contract assembly work is done in North America, which in turn ensures that more components are purchased here.

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## Geomatics

**G**eomatics is a technology sector focussing on the acquisition, storage, analysis, dissemination and management of geographically referenced information. The principal domains of this subsector include positioning and control surveys, topographic and thematic mapping, land and cadastral surveys, hydrographic surveys and nautical charting, remote sensing and image processing, and geographic information systems (GIS). The term geomatics is routinely used in Canada and increasingly so in other countries, although "GIS" or "remote sensing" are also used to refer to the same industry.

### International Environment

While the global economic situation is expected to improve slowly, the growth of the geomatics industry is bolstered by the increasing demand worldwide for spatially related information. Estimated at more than \$10 billion and growing at a rate of more than 20 percent per annum, the global geomatics market represents enormous opportunities for Canada. In 1993, the software business alone was estimated at \$456 million for companies with headquarters in North America.

Statistics on the geomatics industry are not recorded routinely in Canada or internationally. Most of what is written is obtained or extrapolated from market studies. Daratech Inc. of Cambridge, Massachusetts, reviews and analyses the industry, and annually publishes detailed information on more than 250 vendors and products. In 1992, Daratech reported that the U.S. and Canada accounted for 45 percent, Europe for 37 percent, the Far East for 10 percent and the other regions for approximately 8 percent of the worldwide geomatics market. That same year, a study conducted for the Department of Foreign Affairs and International Trade (DFAIT) estimated the geomatics market in the U.S. government (federal and state) to be \$1.1 billion, corresponding to nearly half of the total U.S. geomatics market. Growth in North America outpaced Europe, but lagged behind the Far East, which exhibited the highest growth rate of any region in 1993. A study carried out for Industry Canada (IC) in 1993 estimated that the Latin American market

will be between \$650 million and \$1.5 billion for the 1993-98 period.

### Competition

Worldwide, the market for geomatics products and services is dominated by government — national, state, provincial and local — and public enterprises. Competition in this subsector comes from several developed countries, most of which have very supportive export policies, and in particular from organizations that are heavily government subsidized. Competitors in traditional surveying and mapping have largely been countries with similar industry profiles. These include the United States, France, the United Kingdom, the Netherlands, the Scandinavian countries and, more recently, Japan, Australia and New Zealand. Each has its own niche, principally emanating from economic, cultural or colonial ties. Increased competition will soon be inevitable from countries such as Korea and Poland, which offer low labour costs coupled with modern technology. Competition in the emerging geomatics areas is also expected to come from large U.S. and other international companies that are entering the geomatics market as part of a strategy to develop broader products and services.

### Trends

Geomatics is experiencing a technological revolution that is changing the way clients and suppliers interact, and that will change the products and services that will be in demand in the future.

The significant technological trends include:

- introduction of low-cost, compact, high-capacity data storage and processing technology;
- implementation of distributed, seamless databases;
- use of data network facilities, with integrated information management;
- increased adaptation of a common standard to exchange worldwide digital geographic data;
- widespread access to airborne and spaceborne remote-sensing imaging, which yields high-resolution data for operational applications;
- introduction of low-cost, high-precision Global Positioning System (GPS) technology.

Worldwide business trends over the coming year, as expressed by business leaders, include:

- North America will continue to represent the largest market;
- government will continue to be a dominant client group;
- market growth in Europe and Asia will continue to be rapid and will represent enormous opportunities;
- tremendous growth will take place within the commercial business arena;
- national or international consortia that are capable of arranging financing will be a significant force;
- public-private sector partnerships will be necessary to implement comprehensive geomatics solutions that serve multiple agencies;
- the high cost of populating databases will continue to hamper the forecast rapid growth rates for GIS;
- environmental applications will represent significant opportunities.

## Canadian Position

A study conducted for IC in 1991 estimated that the geomatics industry in Canada consists of approximately 1350 firms employing about 12 000 people. It revealed that 86 percent of the firms were small- to medium-sized enterprises (SMEs) with annual revenues of less than \$2 million and employing less than 50 people. These firms are evenly distributed across Canada, relative to the population. The study reported 30-percent growth in employment between 1983 and 1990, and revenue growth of 115 percent over the same period.

The 1991 study estimated geomatics sales at \$750 million, including \$120 million (16 percent) from exports. Since worldwide annual growth rates of 20 percent to 30 percent have been reported for geomatics during the past four years, we can conservatively estimate an annual growth rate of 5 percent for the domestic market and 20 percent in exports, which would mean that the Canadian geomatics industry is now at just over a billion dollars in sales, including \$250 million in exports.

The development of world-class software systems and applications of geomatics technologies to natural resources management and environmental monitoring has always been a strong suit of the Canadian geomatics community. Canada's strengths in the maintenance of databases in digital form, coupled with its enviable reputation for radar data acquisition capability, are fine examples of contributions to export revenues.

Co-operation emerging among members of the Canadian geomatics community is promising for the success of international trade promotion. In 1993, the Geomatics Industry Association of Canada (GIAC) and Geomatics Canada developed the Competitiveness Strategy for the Canadian Geomatics Industry. The Canadian Council on Geomatics (CCOG), a discussion group comprising officials from federal, provincial and territorial government mapping and charting agencies, has

established a Working Group on Export Market Development to help members of Canadian consortia and companies in the global geomatics market to improve their success rate and expand their imports.

## Strategic Direction

Geomatics can be used strategically to enhance Canadian exports by linking together sectors such as mining, forestry, agriculture, fisheries and environment. The three major application categories of geomatics — natural resources management; infrastructure development and maintenance; and environmental management — will continue to figure prominently in the world marketplace over the next five years. The driving force for growth or increased business may vary from time to time and from region to region, and is often influenced by political, economic or other local considerations. For example, coastal zone information is a major area of growth. Over 120 coastal states have claims for exclusive economic zones (EEZs); however, the majority do not have the required marine geomatics infrastructure to support sovereignty claims and sustainable development. Also notable is the increase in the market due to value-added spatial information, which is expected to reach \$12 billion in the United States, and \$48 billion worldwide, by the year 2000.

Currently, the United States and Western Europe are the two largest geomatics markets. Canada has had some success in both of these markets, particularly in selling to the private sector and through subsidiaries and joint ventures. Business practices in both markets are similar to those in Canada, where contracts can be secured without public-sector endorsement or involvement. The rest of this report therefore focusses on the other markets where government involvement is considered essential for opening doors.

Asia and Latin America are expected to be the two most important growth markets for Canadian

geomatics products and services over the next five years. Other important markets are Central and Eastern Europe and the countries of the Commonwealth of Independent States (CIS). Potential opportunities in specific countries of these regions are significant, and conditions may be especially conducive to market development.

Asia is viewed as the most opportune place for Canadian geomatics products and services, for the following reasons:

- The region's economic buoyancy and planned developments (infrastructure, power, etc.) in China, India and Malaysia will create massive geomatics requirements.
- A report released in 1993 by the World Bank identified Asia's environment as one of the greatest development challenges in the world. Over the last three budget years, the Bank has increased its environmental lending to \$1.2 billion per year, raising the environmental portion of its lending to 12 percent of the total.
- The Canadian geomatics community has developed enviable credibility for its technology and technical expertise, largely generated while working on development assistance projects conducted by the Canadian International Development Agency (CIDA).

In addition, challenges also exist that should be recognized, including unfamiliar market and business practices and cultural differences.

Opportunities in the Latin American market are important for the following reasons:

- the economic wave moving through the region;
- the North American Free Trade Agreement (NAFTA) with Mexico and possible similar agreements with other countries in the region (e.g. Chile);
- physical proximity of the market to Canada.

In each of these regions and in other selected areas, important opportunities are developing, including the modernization of geographic data production infrastructures; the identification of EEZs; and the implementation of cadastral



systems to manage land registration and taxation. The trend toward privatization of land, and the tendency of national governments to transfer responsibilities to local governments, are other commercial opportunities. In addition, geomatics technologies are being used more frequently to manage natural resources through sustainable development, as well as for monitoring the environment.

In the markets identified, the international financial institutions (IFIs) are a vast source of funding for the geomatics application areas. For the IFI projects, the public sector may be engaged to make strategic suggestions during project development and to influence decisions on the scope of these projects.

Canadian firms are finding it difficult to successfully penetrate the global geomatics market. The low level of internationalization of the Canadian geomatics industry, and the high cost of sustaining international marketing make it difficult for most Canadian firms to secure international projects. Many Canadian companies do not have the resources to collect the market intelligence, to seek out the opportunities, to do the required preliminary research, or to sustain lengthy project development cycle efforts.

It is generally accepted that a co-ordinated public-private sector partnership can help to ensure strategic and focussed penetration into the global geomatics market. This will facilitate long-term sustainability as well as short-term gains. Although governments in both industrialized and developing nations form the major potential client base, the need for public-private sector partnerships is particularly evident in developing nations. The recent success of a Canadian industry-government consortium in completing a major project to modernize Mexico's mapping program is an excellent example of this approach.

Specific activities for implementing the strategic direction include:

- conducting a geomatics potential market study for Asia (IC and Natural Resources Canada [NRCan]);
- seconding or assigning geomatics personnel to selected Canadian embassies in Asia and Latin America (DFAIT, NRCan, others);
- seconding government employees to foreign government agencies involved in geomatics (DFAIT, NRCan, IC);
- identifying opportunities to place Canadian geomatics specialists in IFIs (DFAIT, NRCan, Department of Fisheries and Oceans [DFO] and GIAC);
- strengthening knowledge of geomatics in Canadian missions abroad (NRCan, DFAIT, DFO, GIAC);
- strengthening communications mechanisms to share market intelligence and information (DFAIT, NRCan, IC, DFO, GIAC, others);
- promoting government-industry participation in international projects; through appropriate business structures such as flexible business networks (NRCan, DFO, Canadian Commercial Corporation [CCC], Export Development Corporation [EDC], DFAIT, GIAC);
- enhancing support for project financing and commercial export financing (DFAIT, EDC, CCC, CIDA, NRCan);
- focussing the use of Canadian trust funds in IFIs to support projects that could potentially include Canadian geomatics products (CIDA, DFAIT, NRCan, GIAC);
- promoting Canadian geomatics technical capability and expertise through technical missions to selected countries in Asia, Latin America and elsewhere (DFAIT, NRCan, GIAC, industry);
- strengthening the liaison among federal departments and other agencies to improve the effectiveness of government support programs (DFAIT, CCOG, industry).

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- *Geomatics Industries: Industry Profile 1990-1991*. Industry Canada, Ottawa, 1991.

## Contact

Geomatics Canada  
Office of External Relations  
580 Booth Street  
Ottawa K1A 0E4  
Tel.: (613) 996-7644  
Fax: (613) 943-8838



## Instrumentation

**T**he instrumentation industry encompasses manufacturers of virtually all types of measuring, sensing, recording and controlling devices, which are used in most phases of commerce, industry, transportation, exploration and research. The products extend from simple bimetallic thermostats, to technologically sophisticated optical/electronic, computer-based measuring apparatus.

The nine major subsectors are: building control and supervisory systems; environmental monitoring and control devices; geophysical and geological instrumentation; industrial process control; medical instrumentation; navigation instrumentation; photonic (e.g. lasers and optical/electronic) instruments; security and alarm systems; and testing and measuring equipment.

## International Environment

The instrumentation industry has expanded fourfold since 1975, from dollar shipments of less than \$500 million to almost \$2 billion in 1992. Employment has increased by 36 percent, from 13 324 to 18 100 employees.

During this same period, the Canadian market has grown from \$725 million to over \$3.3 billion. Canadian manufacturers produce up to 35 percent of the current needs of the domestic market and export over 40 percent of their production. Because of the multiplicity of instrument types, it is essential that efficient producers establish niche markets worldwide. Thus, most Canadian suppliers specialize in a select number of the many possible types of instrumentation.

Since one of the most important advances during the coming decades will be the refinement of the integration of instruments into production and facilities management systems, many technologies that make such systems possible are also developing rapidly. All of these will serve to provide a data highway from the operator to the executive office, and even to a company's suppliers and clients.

The instrumentation industry will continue to grow rapidly, particularly in the area of devices

and systems that contribute to the increased productivity of its clients. These include instrumentation used in automated manufacturing, advanced sensor technology and photonic-based instrumentation. As the demand for conventional scientific instruments continues to decline, the need for computer-based scientific instruments and sensor systems is expected to increase.

The integration of computers or telecommunications switches with instrumentation will also become more evident in two subsectors — building control and supervisory systems, and security and alarm systems — because of the increased market for intelligent buildings. This term describes buildings that use advanced instrumentation and control systems that are linked together, which respond automatically to changes in the structure's environment, including fire and security occurrences. In addition to automatically initiating proper control sequences, the system alerts operators and tenants, marks events and maintains historical records.

This new generation of product design will eventually make current instrumentation and control systems for buildings and homes obsolete. Communications companies have begun offering custom-designed control systems that integrate, through advanced electronics, communications and facsimile machines, security and environmental controls, entertainment systems and other features into one package that operates through a programmable control centre.

Technological advances are also being made in determining the exact geophysical location of objects. If these advances prove to be economically feasible for automobile and commercial vehicle tracking and mapping systems, it will open new

markets in the navigation instrumentation subsector.

The changes in Europe brought about by the realignment of formerly Communist countries have the potential to benefit the Canadian instrumentation industry. Political restructuring has opened new marketplaces and liberalization has revealed new markets, especially in environmental monitoring and control devices, and in factory refurbishing instrumentation. To capitalize on these opportunities, Canadian firms will likely have to form appropriate networks and be prepared to work in conjunction with various foreign and domestic government organizations.

### European Union

Within the European Union (EU) market area, Germany is expected to remain the largest consumer and producer of process control instrumentation equipment, followed by France, the United Kingdom and Italy. High growth and consequent instrument demand are also expected in Spain, Scandinavia and in the newly emerging Eastern bloc countries. The low instrumentation base and the extreme need for upgrading the former Eastern bloc countries' industrial and commercial infrastructures will facilitate marketing efforts. These modifications to the European political-economic landscape will open the marketplace to the myriad of smaller companies that are able to act quickly to adapt new technologies.

### Canadian Position

Exports of Canadian-made instrumentation started from a small base of about 12 percent of production in 1975, but now exceed 40 percent. Export sales advanced from \$70 million in 1975 to \$960 million in 1992. The U.S. is by far the largest market for Canadian instruments, followed by the European Union. The largest source of imports into Canada is also the United States.

In 1990, Statistics Canada identified approximately 450 Canadian companies whose

primary products and predominant output were classified as instrumentation, with more than 1000 firms that manufactured one or more instrumentation products. Firms listing instrumentation as their primary product in 1991 produced slightly over \$1.88 billion in shipments and employed over 18 700 people. Preliminary and unadjusted figures for 1992 indicate that while the production level increased by 2.7 percent, at \$1.93 billion in shipments, employment in the industry was down approximately 3 percent, reflecting current North American economic realities.

Because most Canadian-produced instrumentation is designed to fill a niche market where price is secondary to performance, the Canadian dollar's fall in value against the U.S. dollar in recent years has made Canadian instrumentation firms competitive in the U.S. market.

World-leading technologies are to be found in the design of Canadian instrumentation industry products. However, this advantage could rapidly change, and these technologies could become commonplace tomorrow. At the same time, a multitude of factors works against the continued competitiveness of smaller firms in the industry, not the least of which are their small size and limited presence in major world markets, and the high level of continuous investment needed to keep up with international competition. These considerations promise to test their managerial and technical capabilities to the fullest. Certainly, they face great opportunities as well as great challenges.

Canada's instrumentation industry is competitive in selected product areas, including geophysical and geological instrumentation; environmental monitoring and control systems; security and alarm systems; remote sensing; laser equipment; and spectroscopy, all of which have shown growth. Although they are competitive and have pockets of outstanding technological excellence, many Canadian firms have the offsetting weaknesses typical of small companies, namely a lack of financial resources and deficiencies in marketing



skills, which prevent them from exploiting potential opportunities. The most effective method of entry for Canadian companies is to find a suitable local partner firm that has in-depth knowledge of the market and clients. Unfortunately, it is often difficult to find a partner who knows not only the details of Canadian technology but also the key personnel in the customers' establishments. This factor could be a major barrier for Canadian companies in penetrating new markets. To assist in overcoming these weaknesses, Industry Canada (IC) will provide advisory support and assist in developing market networking.

Technological change will continue at an ever-increasing rate. Firms in this industry will need to gain access to these new technologies and apply them, to remain competitive. Continued use of links and networks to universities and other centres of basic research is an important method for Canadian instrumentation firms to become and stay competitive in their chosen subsector specialties. Also, by developing agreements with foreign companies for exchanges or licensing of the use of technologies, Canadian instrumentation firms will increase their visibility in world markets.

## Strategic Direction

As an important component of the Canadian information technology (IT) industry, firms specializing in instrumentation technology will benefit from the strategic activities identified in the Sector Overview and the individual subsectors.

## Contacts

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Components and Core Technologies  
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235 Queen Street, 9th Floor East  
Ottawa K1A 0H5  
Tel.: (613) 954-3291  
Fax: (613) 952-8419

Department of Foreign Affairs  
and International Trade  
Sectoral Liaison Secretariat  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 996-1908  
Fax: (613) 944-0050



## Software Products and Computer Services

The software products and computer services industry is a fast-growing information technology (IT) sector with fluid boundaries. The industry includes companies that generate more than 70 percent of their revenue from software products development, professional services and data-processing services. In 1993, according to Statistics Canada, the Canadian software and services market had revenues of \$8.1 billion and employed 70 875 workers. Between 1986 and 1993, the market experienced an annual growth rate of 13.1 percent.

### International Environment

*INPUT* (April 1994) estimates that the worldwide market for software products and computer services grew to US\$276 billion in 1993 and will reach approximately US\$470 billion by 1998, representing an 11-percent compound annual growth rate (CAGR) (See Table 1). It further estimates that computer services, which include software products, represent 27 percent of total worldwide IT spending for internal and external products and services.

Growth rates differ in terms of delivery modes. Professional services make up the largest subsector overall, and will benefit from the shift to client/server architectures and systems-integration purchases. Growth opportunities for software products for new operating systems and client/server architectures are excellent. Worldwide, growth in processing services is expected to stay below the overall industry average, whereas demand for network applications and services will experience the highest growth rate.

**Table 1 — INPUT Worldwide Market Forecast by Regional Area, 1993-98**

	(US\$ billion)		
	1993	1998	CAGR (%)
North America	141	245	12
Europe	82	130	10
Asia-Pacific	47	80	11
Latin America	5	11	18
Middle East/Africa	1	4	20
<b>Total</b>	<b>276</b>	<b>470</b>	<b>11</b>

Competition in the software industry is at an all-time high. Product prices are falling, new technologies are being introduced and sales and marketing techniques are becoming more sophisticated. There are now over 120 million personal computers worldwide, more than 50 million of which run Microsoft Windows. Analysis of data contained in *Venture Capital Yearbook 1994* suggests that areas of higher growth will be database/4GL/CASE and reporting tools, multimedia and CD-ROM titles, business automation such as help desk software, environmental management products, financial management and analysis tools, sales/marketing automation, automated résumé processing, customer service automation, emergency response software and workflow/workgroup software.

North America accounted for 53.8 percent of the world software market in 1993, and is projected to reach US\$82 billion by 1998. The Canadian market is roughly 10 percent of the U.S. market. The U.S. packaged software industry clearly dominates world markets, capturing some 75 percent of global sales. According to *Forbes* (March 15, 1993), sales of U.S.-based software and service vendors have climbed at an 18-percent compound annual rate over the past three years, employing over 400 000 people. Five giants — Microsoft, Lotus, Borland, WordPerfect and Novell — owned 71 percent of the PC software market, or US\$11.5 billion in annual revenues, mainly in operating systems, spreadsheet, database, word-processing and networking software. Thousands of American firms are doing well in fast-growing market segments like home education, PC graphing and charting.

Besides demand-pull factors, other forces are at work, dramatically shaping the software products markets of the next few years. These include changing technologies, changing financial practices and new trends in sales and marketing. Operating system developments, new document architectures, fast new processors, new programming paradigms and the convergence of computer and communications technologies will create new market opportunities and undermine the entrenched positions of most software developers. Together, these technologies will make many existing applications and programs obsolete and will complete the shift from isolation to integration. All software will have cross-platform capability, allowing easy data transfer among various systems and applications. Developers will require broader expertise to be successful.

The emergence of very large and profitable software companies, together with the quest for market dominance, has led to deployment of huge amounts of capital and significant merger and acquisition activity worldwide. In recent months, equity participation in software companies has increased through large venture investments and strong initial activity. Large deals such as Novell/WordPerfect/Borland, Computer Associates/Ask Group (Ingres) and Adobe/Aldus were concluded, and Broadview Associates reported 291 deals valued at US\$14.2 billion in the first half of 1994. Strategic acquisitions in multimedia, client/server and workflow/workflow applications are expected to continue. Alliances and partnering to achieve category leadership and product domination are on the rise.

Product positioning, market segmentation, channel selection, alliances, pricing, distribution and packaging are now taking precedence over technical superiority. Bundling agreements and product suites from the major companies are effectively undercutting smaller players. Superstores and large consumer products retailers have become a significant factor. Direct electronic distribution via Internet and CD-ROM is inexpensive and gaining in popularity. Within the PC software

market, large U.S. distributors such as Ingram and Merisel have recently begun to dominate the European market.

Given U.S. international dominance in software technology development, standards and marketing, the physical and cultural proximity of the huge U.S. market, and the rich infrastructure of ancillary services that has evolved over the years, it makes sense for Canadian software companies to first look south of the border for export sales, partners and marketing support. However, North American markets, though large, are becoming less attractive due to declining growth rates and increasing competitive pressures. Growth in world IT markets in Asia and Latin America provide the opportunity both to diversify exports and to find niche markets where competitive pressures are less intense and sales margins are higher.

## **Canadian Position**

### **Software Products**

While the vast majority of Canada's 10 000 plus software and computer services companies each generate less than \$1 million in annual revenue, at least 15 companies operate in the same dollar range as the top 100 U.S. firms. These include a number that have emerged as world niche market leaders, such as Corel, Cognos, Delrina, Alias and Softimage. Over half of the top 100 firms in Canada are located in Ontario, while 26 are in Quebec and 13 in the Vancouver area.

By U.S. standards, most Canadian software companies are small and undercapitalized at a time when capital intensity is rapidly increasing in the industry. Several Canadian companies, including Alias, Alis Technologies, CTMG, Gold Disk, Hummingbird, Jetform, PenMagic, TSB and Virtual Prototypes, have successfully attracted U.S. venture capital as a result of looking south for financing, managerial talent and support infrastructure.

Apart from the small size of its companies, Canada's software sector is notable for its dynamism and strong export orientation. According to the Branham Consulting Group (1994), the revenues of Canada's top 100 software producers totalled \$1.076 billion in 1993, an increase of almost 30 percent over the previous year. Further, two thirds of the top 100 companies generated half or more of their revenues from exports, principally to the United States and Europe. A recent report on British Columbia's IT industry found that 70 percent of firms gained their first export sale in the United States, followed by 8 percent in the United Kingdom and the remainder in a handful of other countries.

Operating systems development, new document architectures, fast new processors, new programming paradigms and the convergence of computer and communications technologies will likely present as many opportunities for Canadian software developers as they do threats.

While software product type plays an important role in determining the nature of competition a company will face, most Canadian software suppliers face the following challenges:

- meeting U.S. competition worldwide, which tends to be supported by superior capitalization and marketing know-how;
- getting favourable product reviews in the U.S. computer press;
- identifying the best export channels for a particular product;
- designing products so that culturally sensitive and linguistic features can be easily modified by translators and not programmers;
- financing market development abroad, making good on initial commitments and ensuring strong support to local customers;
- making any withholding tax on software products palatable to prospective foreign buyers who order directly from Canada (Note: a recent tax treaty between Canada and the U.S. has abolished the withholding tax on software products);

- overcoming the reluctance of Canadian banks and other financial institutions to extend credit on account of receivables generated by the export of software;
- compensating for piracy in countries such as China and India, where copyright protection laws are inadequate or not vigorously implemented.

### Computer Services

Canada's top 25 professional services firms (companies with 50 percent or more of their revenues from professional services or other systems design activity) generated \$2.6 billion in 1993. The top five account for \$2 billion in revenues, of which 17 percent comes from foreign subsidiaries, revenues or exports. Major Canadian firms include SHL Systemhouse, DMR and ISM, three vendors that have encountered growing interest and success with global strategies.

### Strategic Direction

For the majority of computer services firms, market expansion begins in Canada, then expands to include the United States and ultimately off-shore markets. However, many software product firms have found they need to develop a market in the U.S. before expanding in Canada.

The existing high level of Department of Foreign Affairs and International Trade (DFAIT) support for helping IT companies compete in the U.S. will focus on vertical markets, where strong Canadian capabilities are known to exist. Support for diversification of exports into other markets will aim to provide improved, more in-depth research into the markets of Southeast Asia, Latin America and Europe.

DFAIT and Industry Canada (IC) will focus on identifying Canadian supplier strengths by niche market. This exercise will be followed by complementary market analyses for each niche by priority sector.



## Geographic Priorities

### United States

The Canadian software industry must have easy access to the vast U.S. market, which leads the world in computing expertise. Most of today's leading software technology, from processors to operating systems, originates in the United States. *Software Magazine's* list of the world's top 100 independent software companies includes only seven that are based outside of the United States, and even these have a very strong presence there. Canadian software companies interested in forming strategic relationships therefore naturally look to the United States.

Top distributors of high-volume PC software worldwide are American firms such as Merisel and Ingram. Even the most prominent Canadian software distributors are subsidiaries of large U.S. distributors, and tend to follow the lead of the U.S. parent before distributing Canadian software. A good product review in an American computer magazine, such as a Ziff publication, has proven to be the most effective export launching pad for many Canadian software products.

The U.S. is made up of regional markets that call for different marketing strategies. The strategy should focus on the development of alliances to take advantage of niche market opportunities.

DEFAIT's strategic priorities for the United States, which will focus on eight subsectors (business applications, education and training, graphics, application development and tools, client server, communications, system integrators and service providers) will be:

- to provide the missions with tools to effectively fulfil the delivery of market intelligence;
- to promote partnerships and strategic alliances through a series of regional events;
- to support current and prospective exporters through national stands at major events;

- to encourage the publication of articles in trade and mainstream media about Canadian IT in general and specific companies through tours to media centres in the United States;
- to describe U.S. developments through a newsletter to be distributed to Canadian industry;
- to maintain an ongoing liaison with Canadian industry associations;
- to promote and encourage U.S. buyers to attend key domestic Canadian events.

For its part, IC will commission research into attracting U.S. venture-capital investments in the Canadian software industry and assessing their impact.

### Japan and Asian Newly Industrialized Countries (NICs)

Japan is the second-largest domestic market for software in the world. Japan's market for packaged software is changing rapidly, and is now open to foreign products.

Korea, Taiwan, China and the Association of Southeast Asian Nations (ASEAN) countries are emerging software markets of significance, and several Canadian companies have established successful alliances in Singapore and Hong Kong. Canadian exporters have done extremely well and have increased sales rapidly, but only a fraction of the market has been tapped. More information is needed on distribution channels and on the costs and details of adapting products to local markets.

With this in mind, key goals of Canadian missions will be to:

- provide the Canadian software industry with assistance in contracting consultants in the foreign country who can undertake custom market research;
- help the organizers of domestic Canadian trade events, such as Vancouver's Softworld '95, organize incoming missions of Japanese and Asian NICs' business delegates who are interested in Canadian software ventures.

## Western Europe

The United Kingdom, Germany, France and Italy account for roughly two thirds of the European software market, which was estimated at \$24 billion in 1993. Companies such as Corel, Delrina, Eicon and Cognos have enjoyed notable success in Europe. Canadian software is well regarded, and benefits from the fact that North America is recognized as the leader in innovative software development. Professional services, data-processing and network services, and systems consulting represent an even greater opportunity, due to the European preference for custom solutions.

- The strategy will focus on the development of alliances to take advantage of niche market opportunities.
- Major Pan-European events such as CeBIT and SMAU will be leveraged to produce maximum value for the Canadian participants to develop alliances in all of Europe as well as in other participating countries.

## Eastern and Central Europe

These markets present good opportunities for niche players of all sizes to establish relationships for the future.

- Missions will emphasize the development of market analyses and contacts to facilitate the identification of strategic alliance opportunities.

## Mexico and Latin America

In 1993, the Mexican IT market was roughly \$2 billion, with hardware representing 62 percent, packaged software 12 percent, and services 26 percent. Business and government applications represented more than half the packaged software purchased. Several Canadian professional services and software firms have a permanent presence in Mexico, and many others have participated in trade missions. Copyright law is now enforced vigorously. The North American Free Trade Agreement (NAFTA) has resulted in a heightened

interest in Canadian IT offerings, and more Canadian companies should consider venturing into Latin America.

Industry Canada will:

- conduct a survey of software and computer service opportunities in government, health-care and financial services sectors in Mexico;
- conduct research on Canadian software and computer services firms doing business in Mexico and Latin America, to identify key success factors.

DFAIT will:

- leverage major Latin American events (e.g. Comdex Mexico, Comdex Brazil) to maximize results for Canadian participants;
- conduct strategic partnering missions to key Latin American markets;
- maintain the Canadian Business Centre in Mexico City as a showplace for Canadian suppliers and for special marketing events.

The federal government will continue to collect timely information on opportunities in Europe and in the fast-growing markets of Asia and Latin America.

## References

The following publications can be obtained from Industry Canada:

- Abramson, Neil R. *Key Factors Affecting the Performance of Canadian Firms Doing Business in Japan and Korea*. December 1994.
- Abramson, Neil R. and Janet X. Ai. *Key Factors Affecting the Performance of Canadian Firms Doing Business in the People's Republic of China*. January 1994.
- Abramson, Neil R. and Henry W. Lane. *Key Factors Affecting the Performance of Canadian Companies in the United States*. December 1992.

- Francis, Dr. June N. P. and Scott Caldwell. *Export Strategies and Performance of the Information Technology Industry in British Columbia: An Industry Profile*. July 1994.
- Paterson, Dave. *Borrow Money Here*. August 1994. This is a directory of high-lending units of Canadian banks with experience in export financing.
- Pirovolakis, Christine. *U.S. Federal Information Technology FY95-96 Market Report*. August 1994.
- Venture Management Services. *Marketing Software in Europe: Observations from CeBIT '94*. April 1994.

DFAIT maintains a repository of market analyses and general information on geographic regions. Information can be obtained from (800) 267-8376 or through an interactive fax service (FaxLink) at (613) 944-4500.

## **Additional Marketing Aids**

- The Virtual Marketplace: Supported by CATA, ITAC and the federal government, the Virtual Marketplace is a multimedia marketing kiosk promoting the Canadian IT industry and some 100 individual companies. The kiosk is ideal for display at major international trade shows. For information, call CATA at (613) 236-6550.
- For contact and profile information on Canadian computer software and services companies, which can be extracted from BOSS, WIN Export and the Branham500 database, call (613) 954-3286.
- Industry Canada's Insight diskettes, such as Insight resources for the IT industry and the Insight directory of contacts for Canadian software companies (under development). For information, call (613) 954-3286.

- For consultation of documents of special interest to the software industry (SPA publications, *The Culpepper's Letter*, Release 1.0, INPUT, Dataquest, etc.), contact Industry Canada's resource centre for the IT industry, at (613) 954-3286.
- For contacts and information on inclusion in DFAIT's Software Products for World Markets diskette, call (613) 996-1908.
- For contacts and information on the World Information Network for Exports (WIN Exports), call your local DFAIT International Trade Centre in the Industry Canada Regional Office.

A number of excellent directories, guides and reference books can be purchased from the following private agencies:

Culpepper and Associates Inc.  
7000 Peachtree Dunwoody Road  
Building 10  
Atlanta, GA 30328  
U.S.A.

Software Publishers Association  
1730 M Street N.W.  
Suite 700  
Washington, D.C. 20036-4510  
U.S.A.

## Telecommunications

The telecommunications industry is made up of firms engaged in both the production of telecommunications products and equipment, and those involved in the provision of telecommunications services. The industry also manufactures products used in the production, broadcast and distribution of television and radio signals.

### International Environment

The global market for the telecommunications industry was estimated at \$535 billion in 1992, and is expected to grow at an annual rate of 6.2 percent through the year 2000. Projected growth rates for different subsectors of this industry vary considerably. For example, demand for wireless and broadband products is expected to grow much more quickly than the average for the sector.

The global telecommunications industry is changing rapidly in response to a number of important developments, including:

- regulatory change;
- growing user demands;
- rapid technological evolution and convergence;
- industry restructuring;
- new global markets.

These interdependent trends have had a profound impact on the sector, and the challenge for Canadian firms is to understand and adjust to the changing competitive landscape. Success in this sector, more than any other, means looking at a domestic marketing strategy as just one part of an international marketing strategy.

### Canadian Position

The telecommunications industry is essential to the Canadian economy, and Canadian companies have built on this need to develop world-class capabilities in a high-quality, reliable and widely accessible domestic telecommunications infrastructure.

In 1993, the total annual revenues for the Canadian telecommunications industry were

approximately \$26 billion. The breakdown of revenues was about \$9 billion for equipment and \$17 billion for services, which encompass cellular, reselling and paging services.

In 1992, equipment shipments were \$6 million, more than the apparent domestic market (ADM) of \$5.9 million. The value of shipments has grown at an average annual rate of close to 5 percent over the past five years. The equipment sector's contribution to Canada's manufacturing gross domestic product (GDP) exceeded the contribution of the aircraft and pharmaceutical sectors. There has been no growth in the ADM for telecommunications equipment since 1989, resulting in the growing importance of exports to this sector. With imports of \$2294 million and exports of \$2302 million, the sector had a modest trade surplus of \$8 million for 1992.

The telecommunications equipment segment of the industry is not homogeneous in terms of firm size, geographic distribution or employment. Northern Telecom is by far the largest telecommunications company in Canada, with 1993 revenues of \$8.1 billion and 58 000 employees worldwide. About 30 smaller firms have annual revenues in excess of \$5 million. This group includes MITEL, Gandalf, Newbridge and Glenayre. In addition, there are close to 300 small firms acting as specialized components suppliers or software developers. Overall, it is estimated that the top 30 companies account for over 90 percent of the equipment industry's revenue. The sector directly employs close to 45 500 people in Canada, and domestic ownership in the industry is high.

The success of the equipment sector to date can be traced to Northern Telecom's emergence as a global player striving for world market



leadership and to these second-tier and smaller firms, whose strengths lie in the technological excellence of their products and in their ability to identify and fill market niches. The industry will continue to be competitive in world markets if it actively builds on its technology strengths through extensive research and development (R&D) to consolidate the core technologies base in microelectronics, photonics and software development, while striving to develop a highly focussed and consistent marketing approach to growth niches. The sector's strong international orientation, as measured by its export success, is testament to its entrepreneurial vigour and its ability to compete in global markets.

## Strategic Direction

In today's rapidly changing and complex environment, it is difficult to pinpoint specific countries or even regions that may hold greater potential than others. It is clear that immense export opportunities exist, both with traditional trading partners and in new markets. The geographic priorities identified here are not intended to suggest that firms will not find opportunities and niche markets in other parts of the world.

Major thrusts in 1995-96 will include:

- improving market access and market information by increasing domestic awareness of market opportunities through incoming missions and regional market studies;
- increasing the visibility of Canadian telecom companies and introducing new exporters to marketplaces through participation in trade shows, promotional activities and educational activities under the new exporters programs;
- promoting foreign investment and strategic alliances in the sector in order to attract high-technology firms to Canada.

## Geographic Priorities

More detailed information is available from Industry Canada marketing managers. They can be reached by contacting the office listed at the end of this section.

### United States

The United States continues to be the primary export market for most Canadian telecom companies. In 1992, 60.9 percent of Canadian exports of telecommunications products went to the United States, compared with 8.3 percent to China (the next largest country to which Canada exported), followed by Mexico with 2.1 percent. Capital expenditures for telecommunications are expected to double by the end of this decade, so the U.S. market represents the greatest opportunity for Canadian small- and medium-sized enterprises (SMEs), particularly those new to exporting. Canadian telecom companies must continue to take advantage of the North American Free Trade Agreement (NAFTA) and develop strategies to retain Canada's share of the market.

### Latin America

A telecommunications revolution is currently under way in Latin America, highlighted by significant moves toward privatization, liberalization, and development of private networks. In Mexico, Argentina, Venezuela and Chile, telephone companies have been privatized, creating investment opportunities for foreign buyers and bringing much-needed foreign capital into the companies and countries involved, while at the same time creating opportunities for new competitive services. Over the next five years, this will result in investment of over \$20 billion in Mexico, Argentina and Chile alone. Foreign suppliers will have tremendous opportunities in these markets, which are backed by the purchasing power of some of the world's largest telephone companies.

Mexico is a high priority in Canada's marketing plans for the coming year. The NAFTA, ongoing privatization and deregulation



will bring new opportunities. Telecommunications expenditures over the next decade are expected to be between \$15 billion and \$18 billion. This sector is becoming more competitive as international companies recognize market opportunities in this rapidly growing country of 88 million people. At present, few Canadian telecom companies are active in Mexico, with the exception of Northern Telecom. Canada represents less than 3 percent of total telecommunications exports to Mexico.

Major market opportunities in Mexico include approximately \$100 million worth of rural telecommunications contracts; major investments in analog microwave systems; large central office switches; major expansions in private networks, cellular base stations, and an expected \$8-million spectrum management contract to be awarded by the Secretariat de Comunicaciones y Transportes (SCT).

Extensive privatization has already taken place in Chile, making it an active market. A modernization program is under way, and private networks are being established. Several Canadian companies have successfully penetrated the market, and marketing activity is expected to intensify.

Venezuela, which has one of the least-developed telecommunications infrastructures in South America, has recently privatized its national telephone company (CANTV), and accelerated the pace of privatization and liberalization. In addition, the telecommunications sector is being deregulated, which will create an increased market as new capital is invested and private networks are established. Financing for Venezuela is available from the Export Development Corporation (EDC), and several lines of credit are available.

After many years of chaos, the Argentinian telecommunications environment is beginning to stabilize. The national phone company has been privatized and sold to international consortia, and the market has been opened for the development of private networks to stimulate further investment. Domestic flight capital is being repatriated

for investment in a telecommunications infrastructure, including a possible satellite project. Canadian companies are interested in the market for both equity participation and equipment sales. Availability of financing has improved greatly over the last year, and EDC has recently opened several lines of credit.

Finally, Brazil's telecom market has great potential because of its large population, geographic size and relatively underdeveloped infrastructure. As a result, the state-owned carriers have established a telecom budget of over US\$30 billion to 1997. Brazil's government is expected to abandon its restrictive trade practices and Canadian exporters should be prepared to take advantage of new opportunities to establish partnership arrangements. The most promising opportunity in Brazil in 1995-96 stems from the privatization of value-added telecommunications services, which should result in consulting opportunities.

## Asia-Pacific

Next to the United States, Canada's best trading partners are the countries of the Asia-Pacific region. Although Canada has an overall trade deficit with Asia in the information technologies and telecommunications sectors, our position is improving overall. China is the largest market in the region, but Taiwan, Korea, Hong Kong, and the Association of Southeast Asian Nations (ASEAN) economies are also promising.

China is the largest telecommunications market in the world. Statistics for 1993 reveal tremendous growth in the country's telephone network: 12 million new telephone lines were installed, bringing the total to about 40 million. By the year 2000, China plans to have an exchange capacity of more than 100 million lines and 65 million telephones. In 1993, investment in fixed assets reached US\$4.6 billion, 2.5 times the investment in 1992. In 1993, Canadian exports of telecommunications products to China were valued at over \$200 million.

The focus on China in the coming year will include increasing links with the Ministry of Electronics Industries, which is assuming a greater role in the development of the telecommunications market with Jitong and Liantong; increasing links with provincial telecom authorities whose power bases are growing as the Ministry of Posts and Telecommunications (MPT) is increasingly unable to cope with developmental demands; and maintaining a close relationship with the MPT.

The 1992 domestic market for telecommunications in Korea had an estimated value of US\$2.3 billion, amounting to a growth of 15 percent over 1991. The Korean telecommunications market is projected to reach US\$4.5 billion in value by 1996, and US\$12.5 billion by 2001. By 1995, Korean and other companies will be permitted to enter the international long-distance market, provided they offer full service to the entire Korean domestic long-distance market and make unspecified minimum expenditures on R&D. Before these changes are implemented, telephone rates will be restructured to reduce domestic long-distance rates and increase local rates, so that domestic long-distance service no longer subsidizes local service.

The legal distinction between wire and wireless telecommunications businesses will be eliminated, and Korea will soon clarify its position on competition in several new telecommunications fields, including personal communications service (PCS); trunk radio service (TRS); CT-2; and low orbit satellite communications. Competition is also expected in the domestic public telephone network. Korea Telecom, which will be permitted to go into the equipment business, has begun to investigate strategic alliances with international equipment providers, including Northern Telecom, with a view to becoming a global telecommunications company.

The focus on Korea in the coming year will include tracking liberalization developments in the telecommunications market; encouraging increases in foreign access; and signing an

agreement on the mutual recognition of equipment type approvals.

Hong Kong enjoys a level of telephone service similar to that in Canada. With 42 lines per 100 people, the highest in Southeast Asia, the network is fully digitized. The Telecommunications Authority, formerly part of the General Post Office, has a broad telecommunications mandate. The Hong Kong government is currently introducing competition in fixed-wire services. Three companies have already been awarded contracts for fixed telecommunications network services, and are expected to spend between \$1.2 billion and \$2 billion to establish their networks. Competition is also expected to be introduced in cable television in 1996. Also important for Canada are Hong Kong's close ties with China. Canadian companies established in Hong Kong are extremely active in selling to all levels of the telecommunications hierarchy in China and are poised to invest in the Chinese market as soon as possible.

Viet Nam's telecommunications environment is profoundly underdeveloped, with one of the lowest penetration rates in the world, at 0.3 lines per 100 people. The equipment is antiquated and inadequate. Recent moves by the government to slightly decentralize the Vietnamese economy and make telecommunications development a priority, have made Viet Nam an increasingly attractive market. Canada will assist by identifying and attempting to fulfil Viet Nam's telecommunications training needs; tracking market developments and liberalization policies in the telecommunications sector; and providing companies wishing to enter the Vietnamese market with information on contacts, market opportunities and financing.

Southeast Asia and Australasia represent some of the largest telecommunications markets in the world. The mixture of developed countries with well-defined facilities and developing countries with very limited infrastructures but incredible demand creates enormous market potential for virtually all technologies, including the latest

computer-based, value-added services. Sophisticated systems can be found in Singapore, Australia and New Zealand, including broadband and other state-of-the-art features, while less sophisticated facilities are found in Thailand, Indonesia, Malaysia and the Philippines. International financing from the World Bank, the Asian Development Bank and supplier credits make multimillion-dollar projects a reality for countries and firms willing to establish a presence in this dynamic and rapidly changing market.

The focus on Southeast Asia in the coming year will include encouraging decision makers to participate in selected trade shows that promote Canadian technology; conducting technical seminars on targeted technologies; supporting high-level incoming and outgoing visits by senior officials to promote dialogue and increase opportunities; and participation in Pacific Telecommunications Conference (PTC), and Asia-Pacific Economic Co-operation (APEC) working groups to support Canadian industry.

### **Eastern Europe**

The European Bank for Reconstruction and Development (EBRD) has approved a \$100-million-plus financing package for Central and Eastern European countries to advance telecommunications projects. Central European businesses stand to benefit from this and other demonstrations of confidence. Credit Suisse First Boston has introduced a \$200-million equity investment fund for the region. The Central European Growth Fund will be the first international fund to focus exclusively on Central Europe.

The World Bank is setting a new direction for its telecommunications activities by shifting its policies squarely behind telecom liberalization. The International Finance Corporation (IFC), a World Bank lending affiliate, has shifted the focus of its telecom loans to Eastern Europe. In May 1994, the IFC established Central European Telecommunications Investment Ltd. (CETI), a venture capital company that will fund telcos,

cable television companies, cellular ventures, paging, data and wireless networks. CETI will focus its investments primarily in Poland, Hungary, the Czech Republic and Slovakia, and will also fund opportunities in Bulgaria, Romania, Slovenia, Croatia, Ukraine, Belarus and the Baltics. A total of \$100 million is expected to be raised.

These positive factors plus a strong funding program maintained by DFAIT's Renaissance Program for Central and Eastern Europe, make this target area a high priority for Canadian telecom companies.

### **South Africa**

Telkom (South Africa) has launched a first draft proposal for its contribution to the government's reconstruction and development program. A proposal for a capital investment of \$2.9 billion over a five-year period is under discussion with the South African government, trade unions and the National Telecommunications Forum. The money will be used to substantially increase the penetration of basic services in underdeveloped urban and remote areas. An affirmative action program is already being undertaken within Telkom. The European Investment Bank is expected to start lending operations in South Africa in 1995, and the World Bank will take on projects through its office in Johannesburg. An incoming mission from South Africa to Canada is expected in 1995, and Canada will participate in the Telkom Conference and Exhibition in March-April 1995.

### **Europe**

Canada's second-highest trade surplus in information technology and telecommunications (IT&T) is with Europe, after the United States, and companies will continue to find opportunities there. For example, in the Netherlands, opportunities exist in cellular telephony, satellite communications, and information highway systems and applications. In Turkey, there is interest in VSAT and privatization of the PTT promises to create consulting and investment opportunities. Canada will also continue to

pursue its close ties with France through bilateral consultations in April 1995. Telecom '95 will take place in Geneva, with strong Canadian representation by both government and the private sector.

## Other Strategic Directions in Telecommunications

Industry Canada (IC) launched the Telecommunications Products Sector Campaign (TPSC), a set of interrelated initiatives that will help this sector's SMEs to compete internationally.

The TPSC's objective is to help SMEs respond more quickly to changes in technology and user needs, and to build on existing strengths to help Canadian firms become internationally competitive. The following initiatives are proposed:

**Industry Consortia:** Industry will be encouraged to undertake collaborative projects and to form local and international partnerships.

**Standards:** Telecommunications equipment firms will be encouraged to improve their awareness of, participation in and adoption of technical standards in order to capitalize on global market opportunities.

**Industry Representation:** Industry will be asked to provide input to government policy development to maximize the benefits of these policies to the sector.

## References

The following publications can be obtained from Industry Canada:

- Abramson, Neil R. *Key Factors Affecting the Performance of Canadian Firms Doing Business in Japan and Korea*. December 1994.
- Abramson, Neil R. and Janet X. Ai. *Key Factors Affecting the Performance of Canadian Firms Doing Business in the People's Republic of China*. January 1994.
- Abramson, Neil R. and Henry W. Lane. *Key Factors Affecting the Performance of Canadian Companies in the United States*. December 1992.
- Francis, Dr. June N. P. and Scott Caldwell. *Export Strategies and Performance of the Information Technology Industry in British Columbia: An Industry Profile*. July 1994.
- Paterson, Dave. *Borrow Money Here*. August 1994. This is a directory of high-lending units of Canadian banks, with experience in export financing.
- Pirovolakis, Christine. *U.S. Federal Information Technology FY95-96 Market Report*. August 1994.

## Contact

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Fax: (613) 990-4215



## Information Technologies and Telecommunications

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
South Africa Computer Fair - Info Booth	May-95	Johannesburg	DFAIT	613-944-6590
Maghreb Visitors, Salon Informatique	Jun-95	Montréal	DFAIT	613-944-0396
Telecommunications Mission to East Africa	Jun-95	Kenya, Uganda	DFAIT	613-944-6586
Telecom '95 - Visitors from Africa and Middle East	Oct-95	Geneva	DFAIT	613-944-6994
Outgoing Mission to West Africa	Oct-95	Abidjan	DFAIT	613-944-6579
Telecommunications Mission to South Africa	Nov-95	Johannesburg	DFAIT	613-944-6590
Journées Techniques du Maghreb	Dec-95	Rabat, Tunis	DFAIT	613-944-8134
MECOM Bahrain	Jan-96	Bahrain	IC	613-990-4211
Mission to Saudi Comm '96	Jan-96	Riyadh	DFAIT	613-944-5984
Telecommunication Mission from Iran	Feb-96	Montréal, Toronto	DFAIT	613-944-7029
Overview of South Africa Information Technology Sector	Mar-96	Johannesburg	DFAIT	613-944-6590
<b>Asia-Pacific South</b>				
Demo of Teleconferencing Technology in New Zealand	Aug-95	Auckland	DFAIT	613-995-7652
Quebec Info Tech Mission to Indonesia	Sep-95	Jakarta, Surabaya	Quebec	514-499-2167
Geomatics Partnering Project - Asia-Pacific South	Sep-95	TBD	DFAIT	613-995-9617
Software Market Study - Update	Sep-95	Seoul	DFAIT	613-995-8744
Software Partnering Project - Asia-Pacific South	Sep-95	TBD	DFAIT	613-995-9617
Telecommunications Partnering Project - Asia	Sep-95	TBD	DFAIT	613-995-8956
Microelectronics Partnering Project - Asia	Sep-95	TBD	DFAIT	613-995-8956
Cable and Telephone Market Opportunities Study	Oct-95	Various	IC	506-851-6533
Telecan R&D Partnering	Oct-95	Japan, Korea	Ontario	416-325-6783
Comdex Asia - Info Booth	26-Oct-95	Singapore	DFAIT	613-996-5824
Elecrama '96 - Info Booth	Jan-96	Bombay	DFAIT	613-996-5903
<b>Canada</b>				
Distance Education Mission from New Zealand	Apr-95	Montréal, Vancouver, Toronto	DFAIT	613-995-7652
Strategic Alliance Seminars - South Pacific	Sep-95	Various/Asia	DFAIT	613-995-7652

Note: Dates and locations are subject to change.



Activity	Date	Location	Dept.	Contact
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Geomatics Market Study	Apr-95	Poland	DFAIT	613-996-7107
Communications Tech '95 - Info Booth	Apr-95	Prague	DFAIT	613-996-7107
Info Technology Mission	Apr-95	Budapest	DFAIT	613-992-1449
Info System '95	11-Apr-95	Warsaw	DFAIT	613-996-7107
Telecommunications Market Study	May-95	Poland	DFAIT	613-996-7107
Ocean Remote Sensing Mission to Russia	11-Jun-95	St. Petersburg	IC	902-426-8454
Modern Electronics Fair '95 - Info Booth and Mission	Oct-95	Ljubljana	DFAIT	613-992-1449
Invex - Computer '95 - Info Booth and Mission	10-Oct-95	Brno	DFAIT	613-996-7107
Mission to Turkey Telecom '95	17-Nov-95	Istanbul	IC	613-990-4211
Telecommunications Mission to Poland	10-Mar-96	Poland	DFAIT	613-996-7107

### East Asia

Incoming Mission: Canadian Cable Television Association	TBD	Canada	DFAIT	613-990-4232
Datacom Mission from China	Apr-95	Canada	IC	613-990-4232
Geomatics Market Study	Apr-95	Korea	DFAIT	613-995-8744
Computer '95 - Info Booth	May-95	Hong Kong	DFAIT	613-995-6962
Rural Telecom Mission from China	May-95	Canada	DFAIT	613-995-6962
Telecommunications Joint Venture Mission to India	May-95	India/Various	DFAIT	613-996-5903
Taiwan Ministerial Mission to CATA Conference	May-95	Calgary	DFAIT	613-995-8744
East Asia Mission to CCTA Conference	May-95	Montréal	DFAIT	613-995-8744
Van Seminar	May-95	Seoul	DFAIT	613-995-8744
APEC Technomart - National Stand	May-95	Tacjon	DFAIT	613-995-8744
Korea Laser Products Market Study	May-95	Seoul	DFAIT	613-995-8744
Remote Sensing Industrial Co-operation	Jun-95	Taipei	DFAIT	613-995-8744
Korean CATV Mission to Canada	Jun-95	Banff	DFAIT	613-995-8744
Computer Peripherals Market Study	Jul-95	Seoul	DFAIT	613-995-8744
CATV Trade Show - Info Booth	Jul-95	Seoul	DFAIT	613-995-8744
Taipei Computer Application Show - National Stand	Aug-95	Taipei	DFAIT	613-995-8744
Taipei Satellite & Cable '95 - Info Booth	Sep-95	Taipei	DFAIT	613-995-8744
Comnet '95 - Info Booth	Sep-95	Seoul	DFAIT	613-995-8744
Media Mission from Japan	Sep-95	Canada/Various	DFAIT	613-996-2460
Taipei Telecom '95 - National Stand	27-Sep-95	Taipei	DFAIT	613-995-8744
China International Electronics and Telecom Show - Info Booth	Oct-95	Shanghai	DFAIT	613-995-6962
Software Mission	Oct-95	Singapore	IC	613-954-3284
Geomatics Mission to Korea	Oct-95	Seoul	DFAIT	613-995-8744
Viet Nam Telecom '95 - National Stand	15-Nov-95	Hanoi	DFAIT	613-995-8649

Activity	Date	Location	Dept.	Contact
Telecom Market Study Update	Dec-95	Korea	DFAIT	613-995-8744
Computer Mission to Asia	Feb-96	Bangkok	IC	613-954-3454
Expo Comm China '96 - Info Booth	Oct-96	Beijing	DFAIT	613-995-6962

### Japan

Joint Canada-Japan Workshop on Satellite Communications	TBD	Japan	IC	613-990-4293
NTT (Nippon Telegraph and Telephone) Mission	TBD	Cross-Canada tour	IC	613-990-4293
Fifth Canada-Japan Telecommunications Exchange	Apr-95	Japan	DFAIT	613-996-2460

### Latin America and the Caribbean

Comexpo '95 - Info Booth	Apr-95	Caracas	DFAIT	613-996-5548
Mission to Telnets '95	May-95	Monterrey	Ontario	416-325-6792
Rural Telephony Seminar Workshop	15-May-95	Mexico City	IC	613-998-0416
Software Mission to Mexico	Jun-95	Mexico	IC	613-954-3284
Comdex - SUCESU - National Stand	Aug-95	Sao Paulo	DFAIT	613-996-5549
Canadian Software Networking Day in Mexico	Sep-95	Mexico	IC	613-954-3284
Geomatics Partnering Project - Latin America	Sep-95	TBD	DFAIT	613-995-9617
Software Partnering Project - Latin America	Sep-95	TBD	DFAIT	613-995-9617
Telecommunications Partnering Project - Latin America	Sep-95	TBD	DFAIT	613-995-8956
GIS Solo Seminar	Nov-95	Mexico	DFAIT	613-995-8742
Info Tech Solo Show	Nov-95	Mexico City	DFAIT	613-995-8742
Comdex Mexico '96 - Info Booth	Mar-96	Mexico	DFAIT	613-995-8742

### Multiple Markets

Incoming Visitors to CATA '95 Conference	03-May-95	Calgary	DFAIT	613-996-1908
Corel World Conference and Exhibition	Jun-95	Ottawa	IC	613-954-3294
Visitors from United States, Europe to International Symposium Software Engineering	21-Aug-95	Montréal, Quebec	IC	613-954-2855
Incoming Visitors from United States, Asia, Europe to Softworld '95	25-Sep-95	Vancouver	DFAIT	613-954-3294
Mission to Softworld '96	Sep-96	Halifax	IC	902-426-8454
Incoming Visitors to Intercomm '97	Feb-97	Vancouver	DFAIT	613-996-1908

### United States

Wireless Sector Mission	TBD	Los Angeles	DFAIT	613-944-6577
Partnership Seminar: Information Super Highway	TBD	Princeton	DFAIT	613-944-6577
Telecommunications Market Study	TBD	Dallas	DFAIT	613-944-6577
Telecommunications Market Survey	TBD	Seattle	DFAIT	613-944-6577
NEBS Telecommunications Mission	TBD	New York	DFAIT	613-944-6577
Partnership Events, Computer Software and Services - U.S.	TBD	Various	DFAIT	613-944-6576

Activity	Date	Location	Dept.	Contact
Outgoing Partnering Mission	Apr-95	New England	DFAIT	613-944-6577
Software Strategic Alliance (Follow-up)	Apr-95	Minneapolis	IC	612-333-4641
Info Tech Newsletter - U.S.	Apr-95	Ottawa	DFAIT	613-944-6576
Technology Inflow Mission, Outgoing	Apr-95	Atlanta	DFAIT	404-577-6810
Market Study of New York Regional Electronics Industry	May-95	New York	DFAIT	613-944-5149
Software Partnering Mission	May-95	Boston	DFAIT	617-262-3760
Telecom Partnering Seminar	May-95	New York	DFAIT	609-452-0777
Strategic Partnering Round Table	May-95	Boise	DFAIT	206-443-1777
Midwest Electronics Expo - Info Booth	Jun-95	Minneapolis	DFAIT	613-944-5149
Telecom Mission from New York	Jun-95	Montréal, Ottawa	DFAIT	613-944-6577
Software Seminar & Partnering Event	Jun-95	New York	DFAIT	212-596-1600
Showcase of Canadian Software (Princeton)	Jun-95	New York	DFAIT	609-452-0777
PCEXPO '95 - National Stand	Jun-95	New York	DFAIT	613-944-6576
Computer/Communications Mission from Chicago	Jun-95	Canada	DFAIT	312-616-1860
Chicago Mission to Comdex '95	Jul-95	Toronto	DFAIT	613-944-6576
U.S. Missions to Comdex/PacRim	Jul-95	Vancouver	DFAIT	613-944-6576
Multimedia Strategic Alliance Mission from Cincinnati	Aug-95	Regina	DFAIT	613-944-6577
SETA '95 Market Report	Aug-95	Atlanta	DFAIT	613-944-6577
Strategic Alliance Mission from Atlanta	Sep-95	Alberta	DFAIT	613-944-6577
Voice and Data Transmission Mission from Eastern U.S.	Sep-95	Ottawa	DFAIT	613-944-6577
Info Tech Partnering Seminar	Sep-95	Los Angeles	DFAIT	408-289-1157
Missions from U.S. to Softworld	Sep-95	TBD	DFAIT	613-944-6576
Geomatics Round Table	Sep-95	Boston	DFAIT	617-262-3760
Software Partnering Mission	26-Sep-95	Boston	IC	506-851-6479
National Association of State Telecomm Directors - Info Booth	30-Sep-95	Little Rock	DFAIT	613-944-6577
Geomatics Mission from New England States	Oct-95	Halifax	IC	902-426-8454
Wescon - National Stand	Oct-95	Los Angeles	DFAIT	613-944-5149
Software - Multimedia Courseware NEBS to Boston	Oct-95	Boston	IC	506-851-6479
Electronic Networking Mission to Boston	Oct-95	Boston	IC	709-772-4918
Iowa Info Tech Strategic Alliance Program	Oct-95	Minneapolis	DFAIT	612-333-4641
Colorado Software Strategic Alliances	Oct-95	Denver	DFAIT	612-333-4641
Wireless Telecom Market Study	Oct-95	Los Angeles	DFAIT	613-944-6577
Communications Managers' Association	Nov-95	New York	DFAIT	613-944-6577
Matchmaking Seminar in Conjunction with COMNET	Nov-95	Washington, D.C.	DFAIT	613-944-6577
Process Control Technologies and Software Mission	Nov-95	Boston	IC	902-426-8454
Info Tech Investor Breakfast Seminar	Nov-95	Los Angeles	DFAIT	213-687-7432
Systems Integrators Partnering Project	Nov-95	Chicago	DFAIT	312-616-1860

Activity	Date	Location	Dept.	Contact
Software Mission to California	Nov-95	Santa Clara	IC	613-954-3284
Pacific Telecommunications Conference - Info Booth	Jan-96	Honolulu	IC	613-990-4213
New Exporters to Border States Mission - Software	Jan-96	Seattle	IC	604-666-1443
Wireless Market Study Seminar	Jan-96	Los Angeles	DFAIT	613-944-6577
Matchmaking Seminar (Telecom)	Jan-96	Washington	DFAIT	202-682-1740
Multimedia Software Mission	Feb-96	New England	IC	902-426-9416
Software - Multimedia NEBS	Feb-96	Boston	IC	506-851-6421
Mission to Intercomm '96	Feb-96	Miami	Ontario	416-325-6656
Mission to SPA Spring Conference	Mar-96	San Francisco	Ontario	416-325-6656
Entelec '95 - Matchmaking Event	Mar-96	Dallas	DFAIT	214-922-9806
Telesolutions Conference	Mar-96	Toronto	Ontario	416-325-6815
National Broadcasters' Association - National Stand	Apr-96	Las Vegas	DFAIT	613-944-6577
Comdex/Spring - National Stand	May-96	Atlanta	DFAIT	613-944-6576
PCEXPO '96 - National Stand	Jun-96	New York	DFAIT	613-944-6576

### Western Europe and European Union

SMAU '95 - National Stand	Sep-95	Milan	DFAIT	613-995-6435
Electronics - Atlantic Canada Mission to Hannover Fair	TBD	Munich	IC	506-851-6421
Telecommunications Mission to the Netherlands	Apr-95	The Hague	DFAIT	613-995-6435
Mission to Applied Software Engineering Centre	Apr-95	TBD	IC	613-954-2855
TMAB - Info Booth and Seminar	May-95	Brussels	DFAIT	613-996-1530
Document Management Mission to Europe	May-95	Montreaux	IC	613-954-3454
Telecommunications Sellers' Mission to Italy	May-95	Rome, Milan	DFAIT	613-995-6435
Geotechnica '95 - Info Booth and Partnering Mission	May-95	Bonn	DFAIT	613-995-9617
Thessaloniki International Trade Fair - Info Booth	Sep-95	Thessaloniki	DFAIT	613-995-6435
ESAP Geomatics Partnering Project	Sep-95	TBD	DFAIT	613-995-9617
ESAP Software Partnering Project	Sep-95	TBD	DFAIT	613-995-9617
ESAP Telecommunications Partnering Project	Sep-95	TBD	DFAIT	613-995-8956
ESAP Microelectronics Partnering Project	Sep-95	TBD	DFAIT	613-995-8956
Mission to SMAU '95	Sep-95	Italy	Ontario	416-325-6507
Telecom '95 - National Stand	3-Oct-95	Geneva	DFAIT	613-995-6435
Telecommunication Partnership Mission to Western Europe	16-Oct-95	Western Europe	IC	613-954-3315
IT Forum with SM - Info Booth	Feb-96	Paris	DFAIT	613-995-6435
CeBIT '96 - National Stand and Mission	Mar-96	Hannover	DFAIT	613-995-6435
Electronica '96 - National Stand	Nov-96	Munich	DFAIT	613-995-6435
CeBIT '97 - National Stand	Mar-97	Munich	DFAIT	613-995-6435





## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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**CANADA'S  
EXPORT STRATEGY**

***The International Trade  
Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
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15. Information Technologies and Telecommunications
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16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
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18. Oil and Gas Products and Energy Equipment
19. Power Equipment
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  - Agricultural Technology, Machinery and Equipment
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21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Medical Devices

This sector includes firms providing a wide range of products and services used for diagnosis and treatment of ailments. This includes medical, surgical and veterinary equipment, orthopedic appliances, prosthetics and electro-medical equipment.

### International Environment

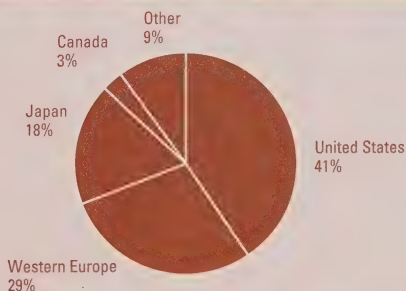
Cost-containment pressures, changing demographics and increasing health consciousness are among the forces driving the growth of health-care equipment and services worldwide. An aging population has fuelled health-care costs and has resulted in a dramatic increase in demand for products such as electronic cardiovascular devices and assistive devices such as mobility aids. In 1993, the world market for medical technology grew at about 7 percent to US\$92.9 billion. The global market is expected to maintain this rate of growth for several years. For certain market segments, growth rates in excess of 20 percent are clearly indicated.

- **Cost Containment:** In North America and much of the industrialized world, pressures to contain burgeoning health-care costs are moving away from labour-intensive health-care practices (almost 70 percent of costs today) to more technology-intensive methods, and greater emphasis is being placed on health promotion and community-based care.

- **Home Health Care:** Health-care products now being used at home include mobility and rehabilitation equipment, incontinence and ostomy products, diagnostic kits, health monitors (blood pressure, blood glucose levels, cholesterol), ventilators, apnea monitors and dialysis units.
- **AIDS Products:** An enormous market has emerged from the AIDS crisis in response to both patient and health provider needs (e.g. diagnostic kits, blood-handling products and blood-screening tests).
- **Transportable Products:** Simple, easily transportable products, such as mobile hospitals, blood analysers and portable X-ray units have witnessed high growth rates in the past five years in emerging Third World markets.
- **Economic growth in developing countries:** Figure 1 illustrates the markets of the United States, Canada, Western Europe and Japan, which have begun to slow. However, consumption of medical products has begun to grow rapidly in the economies of developing markets, particularly Asia. To illustrate this buying power, Asia is predicted to overtake Europe in economic output by the year 2020, and to represent half of the world's economic output by 2050 (compared to 30 percent for Organization for Economic Co-operation and Development [OECD] countries).

While the United States remains the world's largest consumer of medical devices, this market is expected to be less than 35 percent of the world market by the year 2000. Cost-containment pressures and debate over health-care reform in the United States, as well as growth in other markets, particularly Asia and Latin America, account for this trend.

Figure 1 — Market Size by Country, 1993



Source: Health Industry Manufacturers Association, Medical Device Industry Handbook, 1993

In the European Union (EU), the economic slowdown and related cost-control measures by member states have resulted in slower market growth. This trading bloc is, however, still huge, and will remain a market of great importance to Canadian manufacturers. The implementation of a harmonized regulatory system for devices within the EU should allow for more efficient product approvals for firms that are adequately prepared.

The Japanese market has shown slower growth than expected, due largely to government pressure on health-care costs. However, it remains an important market, showing annual growth of 5 percent to 6 percent in yen terms, but stronger growth in dollar terms due to appreciation of the yen. The expanding "silver market" (products for the elderly) is seen as an area of opportunity for Canadian companies.

Canada's market has been subject to enormous pressures. While Canada spent 10.1 percent of its gross domestic product (GDP) on health care in 1993, provincial governments have implemented health-care reform with the principal objective of reducing costs. As a result of such measures as caps on physicians' fees, procedures that shorten hospital stays, de-insurance of certain products and product-use guidelines, the Canadian market for devices may shrink by up to 30 percent by 1997 (Armar International, Montréal, July 1994). As a result, survival and growth in the device manufacturing sector must come primarily from exports. The need and drive for this sector to export has been supported through such broad government efforts as the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT).

The United States, the EU and Japan still account for nearly 90 percent of the global market for medical devices. However, while annual growth rates in Asian markets were in the range of 8 percent for the period 1985 to 1989, they jumped to 18 percent from 1991 to 1993, and to an estimated 22 percent for the period 1994 to 1995, representing a growth rate of three times

that of the industrialized countries. Examples of 1993 growth rates by country in the device market are: Taiwan 15 percent, Korea 18 percent, China 23 percent, Thailand 24 percent. With respect to relative global wealth, it is anticipated that the Asian economies will surpass those of Europe by the year 2020.

Parts of Latin America, particularly Chile and Argentina, have also shown market growth greater than the world average. Brazil represents the largest South American device market, although economic doldrums in 1993 to 1994 hampered market growth. While the Mexican economy is not yet at the point where health-care spending is growing rapidly, it is expected that improvements in income levels in the next few years will result in accelerated market growth. The reduction of tariffs under the NAFTA, as well as the positive reception afforded Canadian products among companies that have already entered that market, suggest that Mexico may be an important stepping stone to companies first venturing into Latin America.

Certain markets of the Middle East show good potential and receptivity to Canadian health-care expertise. A significant number of Canadian and Canadian-trained medical professionals are employed in Saudi Arabian hospitals. The Saudi Arabian and Iranian markets for medical equipment and supplies stood at US\$200 million and \$250 million respectively in 1991 (MediStat, June '93) and in the United Arab Emirates (UAE) at US\$70 million in 1993 (MediStat, August '94).

Some parts of Eastern Europe show substantial market growth. For example, Poland's medical technology market is predicted to grow by 30 percent in 1995, with most of this served by imports (Clinica, July 18, 1994). Many health-care needs in Russia and the newly independent states have not been addressed; however, projects in that area are subject to serious hard currency constraints. Nonetheless, Russia has significantly increased its purchases of Western medical equipment since 1992.

**1993 Markets in Developing Countries  
(US\$ million)**

Brazil	820
China	750
Korea	730
Mexico	615
Taiwan	480
India	475
Argentina	270
Thailand	205

The key players in medical device production are the United States (with 46 percent of world market share in 1993 or \$42.9 billion), Western Europe (29.4 percent) and Japan (17.9 percent). Over a number of years, U.S. companies have made enormous commitments to research and development (R&D) in medical technologies to develop this leading position. However, in the United States, constraints in the domestic market have caused retraction of activity among some large companies, and there has been a significant shift to offshore manufacturing, in some instances because of lower labour costs, but to a large extent because of the repressive regulatory climate engendered by the U.S. Food and Drug Administration (FDA).

While some of the industrial giants of the EU such as Siemens and Philips have dominant positions in certain types of medical equipment (particularly imaging), much of the medical industry strength in the EU consists of small- to medium-sized enterprises (SMEs) specializing in niche areas.

Japanese device firms have not been substantial exporters. They do, however, supply 71 percent of the Japanese market for medical devices.

Within the developing world, local industry frequently lacks the expertise and innovation to adequately supply the domestic market. However, Mexico, Taiwan and Korea now have device industries that are entering international markets.

In many developing countries, international financial institution (IFI) expenditures play an important role in infrastructure development. Despite Canada's role as a leading donor to IFIs, Canadian companies have not taken full advantage of associated procurement opportunities. Total lending from these institutions exceeds US\$40 billion a year, a significant portion of which could be of interest to Canadian suppliers. IFI procurement activity can represent a major source of financing for penetration into developing markets and regions that can otherwise be difficult markets.

### How Companies Compete

Research and development appears to be a critical feature for the medical and health-care products industries. Producers of medical products have enjoyed relatively high commercialization rates for R&D, which has led to increased investment in new medical technologies. Relatively fast product development rates are crucial for developing market demand.

For smaller companies without significant financial resources to conduct wide-scale R&D, production for niche markets appears to be the key, as supported by the European experience. Many of these smaller companies have been able to support focussed R&D efforts through co-operative arrangements with other companies and research organizations.

Canada's regulatory climate supports the development of export manufacturing from a Canadian base. However, pending regulatory changes (a risk-based classification system that may result in a greater level of pre-market scrutiny by Health Canada of a larger number of products, with resulting delays in market entry; and cost recovery) will increase the cost of selling devices in Canada. These measures will make Canada a less "friendly" market for devices of both domestic and foreign origin, and are likely to have a negative impact on the competitiveness of Canadian manufacturers.

## Canadian Position

Although Canada remains one of the world's top 10 device markets, consumption in 1993 increased to only US\$2.5 billion from \$2.4 billion in the previous year. The market is dominated by imports. Canada's trade deficit in devices was in the range of \$1.2 billion in 1993.

Number of Firms	800 companies, approximately 90 percent of which are Canadian-owned
Canadian Production	\$1.3 billion* (1993); one third to one half, or 30 to 50 percent of this is exported, with 60 percent going to the United States
Domestic Consumption	\$2.5 billion
Imports	Approximately 60 to 70 percent of the domestic market is served by imports
Employment	17 000 to 20 000

\* This figure is U.S.-derived (Health Industries Manufacturing Association). As Statistics Canada does not treat the medical devices manufacturing sector as a distinct industry for purposes of data collection, Medical Devices Canada (the national industry association) is taking measures to arrive at an estimate of Canadian production based on information gathered domestically.

The medical/health-care industry in Canada consists of 800 companies producing 1500 categories of products. Three quarters of these firms employ less than 50 people, and almost all are Canadian-owned. Many of these companies are export-oriented and a number of them have developed leading technologies and unique innovative devices. This is largely a result of significant investments in R&D. Challenged by international competition, Canadian companies are expected to increasingly introduce higher value-added products to serve global markets. Overall, this Canadian sector spent 2 percent of sales on R&D.

Although representing only 10 percent of the companies operating in Canada, subsidiaries of

foreign-based multinational enterprises (MNEs), mainly U.S.-owned, dominate the Canadian marketplace. These are mostly larger companies manufacturing some product lines in Canada for the domestic market, as well as marketing and distributing parent-company products. Recently, rationalization in some of these companies has resulted in plant closures and job losses in Canada, while others have gained geographic manufacturing mandates. Some export manufacturing mandates of new products have been facilitated in part through the Medical Devices Technology Assistance Plan (MEDTAP). MEDTAP, an Industry Canada (IC) program administered through the offices of the National Research Council (NRC/IRAP), shares the cost with manufacturers of commercializing innovations that have the potential to be competitive internationally.

Where closures have occurred among MNEs, they have been among firms that have little or no in-house investment in R&D, and whose product line has been a low value-added one, manufactured only or principally for the Canadian market. With some encouraging exceptions, there has been limited investment in in-house R&D by MNEs.

While estimated production remained in the range of \$1.3 billion from 1991 to 1993, it should be recognized that Canadian-owned production has grown as some MNEs have closed down manufacturing, and a significant number of these smaller firms are poised for growth and greater exports.

The negative regulatory climate in the United States has resulted in a number of high value-added U.S.-owned SMEs, particularly in the cardiovascular area, establishing export manufacturing facilities in Canada. While U.S. MNEs have tended to retrench during the recent recessionary period, some of the more nimble SMEs from high-tech industry areas such as California and Houston have shown an increasing inclination to seek alliances with Canadian firms or to establish manufacturing in Canada. Likewise, strategic alliance activity has been developing between



Canadian and European firms, as manufacturers in both areas seek not only new technological advantages but also market access to the other trading bloc.

Over the period 1990 to 1993, three product areas recorded double-digit increases in their export/import ratios: diagnostics (60 percent), equipment and supplies (20 percent) and imaging (19 percent). Other areas that recorded some growth included orthopedics (9 percent) and rehabilitation devices (6 percent).

Highlighted below are some of the infra-structural advantages and strengths of this industry.

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### Canadian Medical Device Industry

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#### Infrastructural Advantages:

- world-class network of universities and hospitals, as well as government laboratories (e.g. NRC);
- generous R&D tax credit policy;
- regulatory environment favouring export manufacturing;
- an internationally well-regarded health-care system that contributes to a positive image and support for Canada's health-care manufacturing sector.

#### Recognized Strengths:

Pioneering work such as:

- development of the world's first heart pacemaker;
- world's first Cobalt 60 cancer therapy unit;

Technology applications in:

- cardiovascular devices;
  - diagnostic equipment;
  - orthopedics/prosthetics/orthotics;
  - assistive devices;
  - medical imaging/brain mapping techniques;
  - biomaterials.
- 

Further development of this industry can be enhanced through the following:

- improved information on such elements as foreign marketing channels, foreign regulatory requirements and potential foreign partners;

- easier access to investment capital for start-up and early-stage firms;
- development of export manufacturing mandates for more Canadian subsidiaries;
- support for SMEs to explore and develop some of the emerging international markets that may not in the short term generate substantial sales.

## Strategic Direction

International business development opportunities for Canadian medical device manufacturers and service providers exist in the following areas:

- imaging (software, therapy and diagnostic, e.g. ultrasound);
- in-vitro diagnostics;
- assistive devices (wheelchairs, patient lifts);
- cardiovascular devices;
- dental.

As well, certain companies in the disposable area, by virtue of outstanding quality, product design or efficient process, are making significant inroads in foreign markets.

These promising subsectors will be targeted for participation in international trade and strategic partnering activities by the responsible recruiting departments. Priority will be given to companies producing devices that are sensitive to cost-containment pressures, and those focussing on the commercial development of other higher value-added devices.

The U.S. and European markets remain the "bread and butter" of many Canadian exporters, with Germany being the focal point of device activity in the EU. Many SMEs will still require support in penetrating these areas. Emphasis within these two areas will focus increasingly on educating Canadian firms about how to meet regulatory requirements and create strategic linkages, and at the policy level will promote international regulatory harmonization and

mutual recognition agreements. Significant emphasis of support for international business development must begin to shift to some extent to emerging markets.

In all of these marketplaces, Canadian health-care firms will be encouraged to gain certification under International Standards Organization (ISO) 9000 series quality systems to enhance their international supply capabilities. Industry Canada (IC), through its Medical Devices Sector Campaign and Toolbox program, will provide mechanisms for industry training in the area of quality systems. IC will collaborate with the Department of Foreign Affairs and International Trade (DFAIT) to build the industry knowledge base regarding harmonized regulatory requirements being implemented within the European Union.

As well, DFAIT will provide information tools to industry on emerging market opportunities, including access barriers (e.g. regulatory, product servicing), product needs served by imports and potential distribution channels within these emerging markets.

In addition to efforts to attract investment from large foreign companies, it is recognized that much of the core innovative strength of the Canadian device industry resides increasingly in small- to medium-sized manufacturers, and these should be the main focus of government efforts.

## Geographic Markets

### Major Markets

Figure 2 indicates the major importers, by country, of Canadian health-care/medical devices in 1993.

Emphasis:

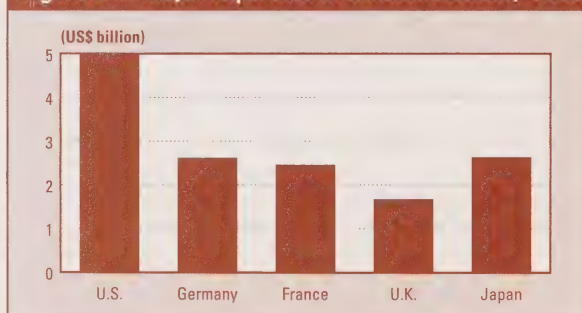
- Strategic Partnerships;
- Export Development;
- Investment/Product Mandates.

Canadian government departments will support Canadian participation in a limited number of U.S. and European health-care trade shows to facilitate the development of strategic partnerships and export opportunities for Canadian companies. Further government efforts will focus on attracting investment from both U.S. and EU manufacturers.

There will also be a greater emphasis on informing Canadian companies about new EU directives for harmonized, device regulation, compliance requirements for the U.S. FDA and other jurisdictions and emerging opportunities. As well, government efforts will continue in negotiations and discussions toward mutual recognition of conformity assessment requirements with the EU and, to some extent, the Asia-Pacific Economic Co-operation forum (APEC).

Although the Japanese market, currently estimated at US\$16.7 billion, is a major one in terms of size, it is an expensive market for new business development. Support for Canadian companies in this market will focus particularly on the expanding Japanese need for products for the elderly (e.g. wheelchairs, patient lifts, walkers, incontinence products), with follow-up activity to capitalize on market interest generated by a Canadian show held in late 1993 in this product area.

**Figure 2 — Major Importers of Medical Devices, 1993**



Source: Export Vision: Health Care Products and Services Market Profiles, DFAIT, Trade Development Operations Division, September 1993, and National Trade Data Bank (U.S.)

## Other Markets

Due to tightening in the U.S. market, Canadian government departments have begun to support initiatives in other markets.

An increased focus will be given to supporting industry efforts to enter emerging markets, particularly in Asia and Latin America. Within Latin America, Mexico is seen as a stepping stone, and support will be given to further exploit opportunities identified at the Canadian Government Health-Care Products and Services Show (January 1995) in Mexico City. However, means to develop the significant market potential of Argentina, Chile and Brazil will also be explored.

In developing markets, a principal thrust of government activity remains the provision of market information and embassy/consulate involvement in response to individual company efforts, as well as various forms of actual financial support for export development.

A federal interdepartmental task force has examined the issue of how to maximize Canada's commercial opportunities related to multilateral development bank (MDB) lending. DFAIT and IC will improve mechanisms for supplier identification and development, and for the timely dissemination of project information and intelligence to potential bidders.

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Note: In the Medical Devices section, except where otherwise specified, market figures quoted are in US\$ and are taken from *Global Medical Device Market Report: Markets for Health Care Technology Products* (revised 1994 edition) Health Industry Manufacturers Association, Washington, D.C.



# Pharmaceuticals

## International Environment

The domestic and international pharmaceutical industry is being reshaped through stricter pricing and dissemination of pharmaceutical products and changing demographics in developed countries, coupled with rapidly increasing demand in non-traditional markets. Delisting of products from government-sponsored health-care plans, policies of generic substitution, and closer scrutiny of application to reduce over-subscribing have recently resulted in slower growth or even decline in some markets. Conversely, the aging population combined with an increase in specific disease groups promise continued future volume growth in specific products such as those of cardiovascular disease, central nervous system conditions, and Alzheimer's. The world market for pharmaceuticals was \$163 billion in 1992-93, and is expected to grow by 2 percent to 3 percent in developed countries, and even more in developing countries.

## International Market Trends

- **Cost Containment:** Health-care systems under financial stress attempt to contain drug prices and seek generic substitution where possible, creating market opportunities for new products of significant therapeutic value and generic medications.
- **Pharmaceutical Benefits Management:** An increasingly important key to marketing success lies with distribution capabilities and information on product effectiveness, hence creating opportunities for pharmaceutical information systems and distribution companies.
- **Focus on Preventive Medicine:** Efforts to reduce costs through greater preventive efforts result in growing markets for vaccines and health-enhancing medications.
- **Business Restructuring:** Mergers and acquisitions, together with rationalization of operations to meet the challenges of international trade and markets, provide oppor-

tunities for specialized producers with marketing capability and world product mandates.

- **Research and development** will remain the cornerstone of the future, creating opportunities for innovative research organizations, technical expertise and pioneering enterprises.

The U.S. recently became the world's largest consumer of pharmaceuticals (with 34 percent of world market share) displacing Europe, which has undergone a small market decline in the last year. The U.S. share of world sales is expected to stabilize and then decline, as health-care cost-containment measures take hold in the U.S. and as the markets of Latin America and Asia expand.

The United States, Europe and Japanese-based multinational enterprises (MNEs) will continue to dominate production for the foreseeable future, especially in the newer products. The generics market, offering relatively easy market entry, will likely be subject to a proliferation of new entrants, especially in Europe, and will be subject to intense competition from independent generic producers and the generic divisions of brand-name companies.

Currently, the rapid growth markets are Eastern Europe (particularly Hungary, Poland and the Czech Republic), China, India, Brazil, Chile, Malaysia and Viet Nam. With few exceptions, all countries afford opportunities, with some being particularly fertile ground for generic manufacturers.

## How Companies Compete

Canada's excellent research infrastructure and tax incentive program, as well as its international standards of patent protection, put it in a good position to research, produce and market patented products internationally. Export success will depend on Canadian multinational operations' ability to attract world or regional product and research mandates, and to provide production and other facilities that are integrated with out-of-country operations.



A number of Canada's independent generic and fine-chemical companies, which are known for producing quality products, have been active internationally in Mexico, Hungary, Lithuania and New Zealand. To maintain momentum, they will build links with marketing organizations in other countries and compete with MNEs on price and distribution capability. For smaller R&D-oriented or generic companies, the key will be to develop co-operative arrangements with other companies that market internationally.

Canada's regulatory process, from drug product approval standards through to R&D tax credits, encourages confidence in Canadian products and the development of export capabilities.

## Canadian Position

Canada is a significant consumer of pharmaceuticals, purchasing \$5.3 billion in products in 1993. Growth in the 1980s averaged around 9 percent per year, but has slowed of late. The pharmaceutical industry has attracted international investment in R&D, along with significant domestic expansion in manufacturing capability for generic products and fine chemicals. The industry is made up of some 185 operations, which produce or distribute a full range of pharmaceutical products. Over 40 percent of these firms have less than \$2 million in annual sales, while 10 companies, eight of which are MNEs, have over \$100 million in sales. The large Canadian generic producers are particularly interested in new market opportunities in Mexico, Viet Nam, Singapore and Malaysia. Otherwise, the bulk of exports and imports (mainly to and from the U.S.) consists of intra-firm trade within MNEs with imports exceeding exports at the rate of 4:1. Canadian-based pharmaceutical companies are meeting the opportunities afforded by the North American Free Trade Agreement (NAFTA), with a near doubling of sales to Mexico in the last year. In the longer run, Canadian producers are expected to specialize either with

product mandates or with small volume, short production-run products.

Although they make up only about 30 percent of the companies operating in Canada, U.S. and European subsidiaries of foreign-based MNEs dominate the Canadian market with over 70 percent of sales. They are also responsible for almost all of the R&D in Canada, apart from that done by the numerous small biotechnology companies. Many of these biotechnology companies rely on the MNEs for financial and other support, through licensing and marketing arrangements and other partnerships. Rationalization has resulted in plant closures and manufacturing job losses in Canada, while R&D has expanded significantly. Improved patent protection afforded by Bill C-91 has promoted R&D investment, and has enabled Canadian operations of MNEs to argue more effectively with corporate headquarters for product mandates and the manufacturing spin-offs of R&D activity. Canada's excellent infrastructure for research and manufacturing continues to be an asset.

The Canadian pharmaceutical industry has a number of infrastructural advantages, including:

- world-class universities, hospitals and government laboratories (e.g. National Research Council [NRC]);
- a world-class leadership role in telecommunications infrastructure linked to research and marketing institutions worldwide;
- a generous R&D tax credit policy;
- a regulatory environment favouring export manufacturing, including recognition agreements under negotiation with Russia, the European Union (EU) and other countries;
- a health-care system of international repute, which contributes to a positive image and support for Canada's pharmaceutical industry.

Canada's pharmaceutical industry, though it is of world standard, faces a number of challenges that will shape its future development, including:

- the lack of world or regional product mandates for Canadian subsidiaries has placed some operations in Canada in jeopardy as the industry moves to consolidate operations internationally and takes advantage of economies of scale afforded by new regional trade and other agreements;
- cost constraints in the health-care system limit growth possibilities in Canada, and require companies to develop export capabilities.
- continued support for the Centres for Research Excellence program to enhance Canada's scientific capability;
- continued Canadian presence in such international forums as the International Trade Commission, G-7 and others, to maintain Canada's profile as an international trading nation.

## Strategic Direction

International business development opportunities for Canadian pharmaceutical companies exist in the following areas:

- developing countries that are modernizing their public-health systems and searching for inexpensive high-quality products;
- specialized technical support in production, marketing and informatics as more and more countries develop their capabilities to produce top-quality pharmaceutical products;
- specialized therapeutic areas such as Alzheimer's, cardiovascular, central nervous system, and gene-based ailments, where Canada has a strong research lead.

These areas will be encouraged, as will efforts on the part of various levels of government to improve regulatory processes, clinical evaluation capabilities and overall scientific infrastructure. Attention will also be directed toward:

- support for strategic alliances between small research firms and larger firms with development and marketing capabilities;
- continued efforts by the federal government to obtain mutual recognition agreements, regional product and research mandates and other arrangements to gain easier access to markets, especially in the rapidly growing countries of Asia, Latin America and Eastern Europe;

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## Health-Care Services

The health-care sector includes firms and individuals providing a wide range of services related to the design, establishment, operation, maintenance and improvement of health-care systems and institutions. These include consultants and consulting firms specializing in hospital management; long-term care facilities and home-care operators; architects and consulting engineering firms involved in health-care facilities; educational and training institutions; specialists in policy planning, health economics and financing; environmental health and information systems; and medical laboratories.

### International Environment

Opportunities for providers of health-care services lie in both developed and developing countries. In developed countries, health-care expenditures are generally funded internally by governments or the private sector, while in developing countries, funding for health and other development projects is largely obtained through loans or grants from the World Bank or regional development banks.

Priorities for developed countries centre on cost containment, efficient managerial practices, resource optimization, insurance plans, computer information systems for patient care, billing and hospital administration, long-term care facilities and home-care operations.

Developing countries face numerous challenges in the area of health, and often lack the infrastructure and human resources to provide a full range of services. Often, sector planning and institutional strengthening are needed, coupled with the necessary infrastructure, personnel and national programs for public health and wellness, with particular emphasis on the provision and expansion of primary and preventive health care. In this context, in 1991, the World Bank committed to approve projects relating to health care, population and social development of an annual minimum value of US\$800 million.

Within the industrialized world, the U.S. market is the largest and presents the greatest potential for Canadian health-care service firms. Opportunities exist particularly in health-insurance schemes, cost-containment programs

and systems and data management. A number of countries in Latin America and the Caribbean, Asia and Southeast Asia, Eastern Europe and Saudi Arabia also constitute markets with promising returns.

Key competitors in the health-care services sector have traditionally come from the United States, Western Europe and some Southeast Asian countries. Competition in the international market is expected to grow substantially as a result of the economic constraints experienced in many domestic markets in recent years.

### Canadian Position

The health-care services industry in Canada consists of 2500 primarily Canadian-owned firms, mainly small- and medium-sized, generating \$3 billion annually and employing 150 000 individuals.

The health-care services sector is rapidly becoming one of Canada's major growth industries. As a result of continuing economic pressure on the domestic health-care system, an increasing number of high-quality professional and competitive services are becoming available for export. A major strength in this industry is the wealth of expertise available in both the public and private sectors, such as in the management of health-care facilities and the elaboration of health-care systems. By combining the best from each, the industry can tailor its services to the special needs of its international clients.

**Advantages:**

- a health-care system of international reputation that projects a very positive image and provides support for the sector;
- efficient and effective system that demonstrates superior managerial capability (e.g. only 2.5 percent of health budgets is spent on administration);
- excellent quality and reputation of Canadian institutions and institutional management;
- increasing partnership between the public and private sectors;
- the excellent reputation of Canadian suppliers of health-care services who have won contracts abroad (e.g. Canadian management of a World Bank health project in Poland).

**Weaknesses:**

- generally limited exposure to international competition and foreign business practices;
- limited number of consulting services firms actually specializing in health care;
- preponderance of small- and mid-sized firms with limited resources.

## Strategic Direction

International financial institution (IFI) expenditures on health-care services in lower- and middle-income economies point to significant opportunities for Canadian companies in Latin America and the Caribbean, the Asia-Pacific region and Eastern Europe. There is a need to increase awareness of IFI projects as a leading source of export opportunities, and to educate suppliers on business practices in IFIs. After a series of workshops on business opportunities at the World Bank, to be held in Canada in 1994-95, a mission of Canadian business people to the World Bank and the Inter-American Development Bank will be arranged (Industry Canada [IC], Department of Foreign Affairs and International Trade [DFAIT]/missions).

The United States will continue to represent an attractive market for Canadian suppliers of health-care services, but the implementation of health-care reform in that country, if successful, will require evaluation and adjustments. After a series of workshops on business opportunities in health consulting and informatics in the United States, to be held in Canada in 1994-95, a mission or a series of missions will provide additional and deeper insights (IC, DFAIT/missions).

Mexico will represent additional opportunities for Canadian health-care suppliers in the framework of the North American Free Trade Agreement (NAFTA). Following the issuance of a study prepared by DFAIT in 1994-95 on the Mexican market in the health-care services sector, an investigation mission to that market will assist in identifying specific opportunities (IC, DFAIT/missions).

Saudi Arabia, Lebanon, Jordan, Syria, the West Bank and Gaza Strip remain very attractive markets, but still need to be explored by Canadian suppliers to realize their full potential. Canadian firms also need to develop the appropriate marketing skills to penetrate them. As a result of IC's study and a series of workshops on Saudi Arabia, to be held in 1994-95, a mission to that region will help Canadian suppliers identify export opportunities and become familiarized with local business practices (IC, DFAIT/missions).

Efforts are required to contribute to the development of a provincial non-competitive approach to international trade in health-care services. This will be done through meetings with members of the Working Group in Health Care Services or meetings of the Working Group (IC, Health Canada [HC], DFAIT, provincial departments of health and economic development).

Trade commissioners in missions abroad still need to know more about Canadian suppliers of health-care services and the various types of services they offer. To collaborate in that education process, visits will be organized to missions in the more promising markets. The Canadian



Suppliers of Health-care Services database will also be updated and distributed to trade commissioners in a more user-friendly Windows format (IC).

## Contacts

Industry Canada  
Consulting and Engineering Services Industries  
Directorate  
235 Queen Street, 7th Floor East  
Ottawa K1A 0H5  
Tel.: (613) 954-2981  
Fax: (613) 941-8464

Department of Foreign Affairs  
and International Trade  
Services Industries and Transportation  
Services Division  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 996-0245  
Fax: (613) 996-1225

## Medical and Health-Care Products and Services

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Mission to the Middle East	TBD	Riyadh, Beirut, Amman	IC	613-954-2951
Health Study on Market Potential in Kenya/Uganda	Apr-95	Nairobi	DFAIT	613-944-6586
Medic Africa '95: Info Booth	Apr-95	Johannesburg	DFAIT	613-944-6590
Medical and Health Mission from Jordan, Lebanon and Syria	May-95	Canada/Various	DFAIT	613-944-6346
<b>Asia-Pacific South</b>				
Asia Medical Show '95 - Info Booth	TBD	Fukuoka	DFAIT	613-996-2460
MEDIC '95: Info Booth	Oct-95	Kuala Lumpur	DFAIT	613-996-5824
<b>Canada</b>				
Regional Seminars on Harmonized Regulations in EU	TBD	Canada/Various	IC	613-954-3068
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
INMED '95: Info Booth, Mission	TBD	Kiev	DFAIT	613-944-1437
Health-care Mission from Hungary	May-95	Toronto, Montréal	DFAIT	613-992-1449
<b>East Asia</b>				
Biotech Seminar	TBD	Taiwan	DFAIT	613-996-2807
Korean Pharmaceutical Sector Market Study - Update	Jun-95	Seoul	DFAIT	613-996-2807
Medical Equipment and Pharmaceutical Show: Info Booth	Nov-95	Taipei	DFAIT	613-996-2807
Medical Equipment Market Study: Update	Feb-96	Seoul	DFAIT	613-996-2807
<b>Japan</b>				
Elderly Products Mission to Canada from Japan	TBD	Osaka	DFAIT	613-996-2460
Pharmaceutical Research Partnering	Apr-95	Tokyo, Osaka	DFAIT	613-995-6634
Health-care Products Buyers' Mission from Japan	05-Jun-95	Calgary	DFAIT	613-996-2460
Solo Elderly Product Show and Seminar	Aug-95	Osaka	IC	613-954-3068
<b>Latin America and the Caribbean</b>				
Biotechnology/Diagnostic Chemicals Mission	TBD	Buenos Aires	DFAIT	613-996-5549
Expo-Salud: Info Booth, Mission	TBD	Santiago	DFAIT	613-996-4199
Solo Show at Canadian Business Centre in Mexico City	TBD	Mexico City	IC	613-954-3068
Cuban Trade Fair and Caribbean Mission	Apr-95	Caribbean/Various	IC	613-996-3068
Expomedica '95: Mission	Jul-95	San Salvador	DFAIT	613-996-6129

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
Expo Medica: National Stand	Oct-95	Panama	DFAIT	613-996-6129
Mission: Outgoing	Jan-96	Mexico City	IC	613-954-2951

### Multiple Markets

Identification of Potential Pharmaceutical Investors	TBD	Europe, Japan, U.S.	DFAIT	613-995-6634
Investment Prospecting Initiative Pharmaceutical	TBD	Japan, Europe	IC	613-954-5458

### United States

Mission to IFIs and/or Executing Agencies	TBD	Washington, D.C.	IC	613-954-2951
Mission: Health Consulting/Informatics	TBD	Chicago, Dallas, Houston	IC	613-954-2951
NEBS Medical Products Missions from B.C. and Alberta	TBD	Seattle	DFAIT	613-944-9482
U.S. Health-care Products Newsletter	TBD	Chicago	DFAIT	613-944-9482
Atlantic Canadian Software Mission	May-95	Chicago	IC	506-851-6421
Mid-Atlantic Health Care '95: National Stand	17-May-95	Atlantic City	DFAIT	613-944-9482
Canadian Hospital Association: Buyers from U.S.	05-Jun-95	Calgary	DFAIT	613-944-9482
Pharmaceuticals Purchasing Strategies Promotion	Aug-95	Dallas	DFAIT	613-944-7348
Incoming Mission of MRI Technologies, Houston	Sep-95	Winnipeg	DFAIT	613-944-9482
Medinfo '95: Partnering Mission from Chicago	Sep-95	Vancouver	DFAIT	613-944-9482
Outgoing Matchmaking Mission to HIDA	Sep-95	Baltimore	DFAIT	613-944-9482
Health-care Services Mission	Oct-95	Chicago, Dallas	DFAIT	613-944-9482
Medical Suppliers Mission to U.S. Veteran Affairs	Oct-95	Chicago	DFAIT	613-944-9482
Pharmaceutical Teaming Mission from Texas	Oct-95	Quebec	DFAIT	613-944-7348
Medical Tech Seminar & Mission	Nov-95	New York	DFAIT	613-944-9482
Medical Products Seminar and Mission	Nov-95	Minneapolis	DFAIT	613-944-7348
Mission to MED TECH '95 from U.S.	Nov-95	London, Ontario	DFAIT	613-944-9482
National Home Health-care Show: National Stand	15-Nov-95	Atlanta	DFAIT	613-944-9482
Radiology Society of North America: National Stand	Dec-95	Chicago	DFAIT	613-944-9482
Bio-Pharmaceutical Mission from California	Jan-96	B.C., Ontario	DFAIT	613-944-7348
Medical Design MFG West '96: Info Booth	Jan-96	Anaheim	DFAIT	613-944-9482
Medical Marketing Study: Update	Feb-96	Minneapolis	DFAIT	613-944-9482
Medical Products Buyers from Minneapolis	Mar-96	Manitoba	DFAIT	613-944-9482
New England Health Care Assembly: Partnering	Mar-96	Boston	DFAIT	617-262-3760

### Western Europe and European Union

Medica '95: Info Booth, Mission	Nov-95	Dusseldorf	IC	613-954-3068
Medicine '95 International Trade Fair: Info Booth	Dec-95	Stockholm	DFAIT	613-996-1530



## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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Canada

# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- |   |   |
|---|---|
| <p>Overview</p> <ol style="list-style-type: none"><li>1. Advanced Manufacturing Technologies</li><li>2. Agriculture and Food Products</li><li>3. Aircraft and Parts</li><li>4. Automotive</li><li>5. Biotechnologies</li><li>6. Business, Professional and Educational Services</li><li>7. Chemicals, Plastics and Advanced Materials</li><li>8. Construction Products</li><li>9. Consumer Products<ul style="list-style-type: none"><li>■ Apparel and Fur</li><li>■ Textiles</li><li>■ Footwear</li><li>■ Sporting Goods (including recreational watercraft)</li><li>■ Tools, Hardware and Housewares</li><li>■ Residential Furniture</li><li>■ Business and Institutional Furniture</li></ul></li><li>10. Cultural Industries</li><li>11. Defence Products</li><li>12. Environmental Equipment and Services</li><li>13. Fish and Sea Products</li><li>14. Forest Industries</li></ol> | <ol style="list-style-type: none"><li>15. Information Technologies and Telecommunications<ul style="list-style-type: none"><li>■ Sector Overview</li><li>■ Computers and Peripheral Equipment</li><li>■ Electronic Components</li><li>■ Geomatics</li><li>■ Instrumentation</li><li>■ Software Products and Computer Services</li><li>■ Telecommunications</li></ul></li><li>16. Medical and Health-Care Products and Services<ul style="list-style-type: none"><li>■ Medical Devices</li><li>■ Pharmaceuticals</li><li>■ Health-Care Services</li></ul></li><li>17. Minerals and Metals</li><li>18. Oil and Gas Products and Energy Equipment</li><li>19. Power Equipment</li><li>20. Primary/Secondary Industrial Machinery<ul style="list-style-type: none"><li>■ Mining, Forestry, Pulp and Paper</li><li>■ Agricultural Technology, Machinery and Equipment</li><li>■ Ocean and Marine Shipboard Technology</li></ul></li><li>21. Rail and Bus Equipment</li><li>22. Space</li><li>23. Tourism</li></ol> |
|---|---|

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Minerals and Metals

**T**his sector covers ferrous and non-ferrous industries, and coal and industrial minerals. It includes mining, upstream processing such as smelting and refining, and downstream semi-manufacturing. Related equipment and services are covered in the second section of this report.

### International Environment

Canada is the world's leading exporter of minerals and metals, followed by Australia. Recently, however, Russia has become an increasingly significant exporter of major non-ferrous metals. The largest importers and consumers of minerals and metals are Japan, the member countries of the European Union (EU), and the United States, which is also a major producer. China is also attracting more and more interest as both a major producing and consuming nation.

Growth in production is expected to continue, especially in Chile, Australia, Mexico, Brazil and China, while the fastest-growing consumption will occur in Asia (China, South Korea, Taiwan and Southeast Asian countries).

The forecast for demand in 1994-95 is positive, as most consuming Organization for Economic Co-operation and Development (OECD) countries are anticipating slowly improving industrial growth, and as Asian growth continues. Continued high export levels by the former Soviet Union (FSU) of aluminum, nickel and other metals will continue to put a damper on prices and limit increases for these commodities. North American demand is expected to show gains as the U.S. and Canadian economies continue to recover.

The results of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) will bring improvements in market access for non-ferrous minerals and metals, although they may not be as substantial as expected, especially for the European Union. This improvement in market access may not translate into increased Canadian exports, since Canada's production base for non-ferrous metals is not expanding. Canadian industry will likely seek to further diversify its

foreign sales to include the faster growing markets, and also to increase its overall production and sales. This increase will have to come from mines outside Canada that are owned by Canadian firms. Prices for some non-ferrous commodities have shown a positive trend in 1994, and prospects are good for this trend to continue in the years to come, although a return to the high prices of the late 1980s is not anticipated.

Globally, the steel industry will grow, but slowly. The forecast is for a decrease in international trade due to an emphasis on domestic production, using the electric arc technology. This technology uses scrap as feed, which should result in the trade in iron ore and metallurgical coal. The major exception is China, which has embarked on a major expansion program for its steel industry. When Chinese steel production begins to narrow the domestic gap between production and consumption, the drop in international trade will be even more pronounced. International trade in ferro-alloys may offer better prospects for long-term growth, while the price trend for ferrous products should remain stable.

As indicated, international trade in metallurgical coal is not expected to grow in the near future, due to the increase in electric arc steel-making and the development of blast furnace technologies that use less coal. Consequently, prices are expected to remain under pressure. The prospects for thermal coal are much brighter due primarily to projected increases in thermal power generation in Asian countries. This growth will create international trade opportunities for the Canadian coal industry, but stiff competition will ensue, mainly from Australia and Indonesia. The Uruguay Round may also have an effect by establishing more subsidy discipline in Europe, bringing the closure of unprofitable mines,

especially in Germany, and creating market opportunities for exporters.

Canada has an abundance of high-quality industrial minerals, including potash, sulphur, asbestos, limestone, granite, and peat moss, which offer good prospects for increased production and exports. Prices should firm up with economic recovery, and are not expected to increase significantly in the long term because of international competition.

The challenges facing the minerals and metals industry are not limited to supply and demand, tariffs, production costs or technology. The greatest long-term challenge to industry growth may come from government regulations related to trade, environment and health issues. In pursuit of sustainable development, multilateral organizations such as the agencies of the United Nations (e.g. UNEP, ILO, IARC, CSD, ECE, IFCS), the OECD, and the GATT or World Trade Organization (WTO) and participating governments are developing policies and strategies to reduce risks associated with the production, transportation, use and disposal/recycling of chemicals. Since the definition of chemicals includes all minerals, metals and their compounds, minerals and metals are also a major target of multilateral organizations' activities.

Such activities have led, for example, to the Basel Convention and the OECD risk-reduction exercise. The outcome of such agreements and exercises may lead to the imposition of severe constraints on, or even to the outright prohibition of the production, use, or trade of commodities, their products and/or processes. These initiatives may very well have a major impact on the marketplace. While Canadian industry has long demonstrated its ability to meet the challenges of the marketplace, a strategy to respond to these new challenges will require government participation.

Traditionally, Canada, the United States and Australia have received most of the global investment for exploration. However, a number of countries, particularly those in Latin America that have good mineral potential, have recently

created a more favourable environment for foreign investors, resulting in fiercer competition for mineral investment. Indeed, increasing production from Australia, and from Asian and South American countries that have recently liberalized their investment climates, will affect Canada's relative share of the world market.

The minerals and metals industry has always been very cyclical. Like other industrial sectors, it is affected by the level of economic activity. The long lead time required for projects to come on stream, typically three to five years, also limits the ability of industry to respond to changes in demand. A substantial share of production comes from developing countries, where facilities are often owned by governments that may at times pursue objectives that do not give priority to market stability. Through the creation of commodity study groups, Canada has for decades pursued a strategy of maximum market transparency to foster a more stable and orderly market.

## Canadian Position

Canada's minerals and metals industry is dominated by companies that are among the world's most sophisticated and competitive in the exploration, extraction, processing, manufacturing and export of minerals and metals. The industry has long been a major contributor to the Canadian economy, not just in terms of its production, but also for the key industries that are based on its output and activities. Consequently, companies in this industrial sector typically have the resources required to support their trade promotion activities (see Table 1.)

Canada is one of the world's leading producers of primary and semi-fabricated aluminum, copper, nickel and zinc, exporting the majority of its refined non-ferrous metal production. It is also a leading exporter of coal, asbestos, elemental sulphur and potash. In 1992, Canadian steel exports of 3 million tonnes represented 4.1 percent of world exports.

**Table 1 — The Minerals and Metals Industry and the Canadian Economy, 1992**

Gross Domestic Product	4.2%
Employment	2.8%
Exports	16.2%
Rail and Sea Traffic	60.0%
Single-industry Communities (number of)	115
Mines (number of)	320+
Downstream Establishments (number of)	7500+

Source: Statistics Canada

Due to the global nature of metal markets, the largest Canadian non-ferrous metal producers have developed into large integrated international companies with diversified geographical interests. These companies are among world leaders in their fields in size, competitiveness, environmental protection, technology and trade. Their export markets are diversified, although the U.S. remains the largest single export market for most of them. Even with the implementation of the North American Free Trade Agreement (NAFTA), trade actions in the U.S. remain a concern.

In recent years, known reserves of major non-ferrous minerals have decreased. The industry contends that the complexity, instability and overlap in domestic environmental regulations, coupled with growing land access constraints, have made Canada less internationally competitive in mining investment. There appears to be a consensus that the current levels of expenditure on exploration are not enough to maintain long-term production. The impact on Canada's overall trade balance could be significant.

Downstream manufacturing activities are generally oriented toward domestic and continental markets. These manufacturers are typically smaller companies with a regional scope. However, this may change as access to foreign markets improves for Canada's processed and manufactured products.

Canadian ferrous producers are primarily domestic, with significant exports to the United States. Canadian steel companies do some exporting overseas, but their market is essentially North America. In spite of the NAFTA, trade actions in the U.S. have also affected the growth of Canadian exports in that market. Iron ore companies have a strong North American focus, but have also successfully exported to Europe for many years, as well as sporadically to other foreign markets.

Canada has an abundance of rich deposits of metallurgical and thermal coal, but long distances to Canadian ports will continue to present a major cost challenge to producers. Over the last two years, there has been significant restructuring in Western Canadian operations; there are now fewer operators, and they have demonstrated their ability to operate profitably in the Canadian context. As a result of the Uruguay Round, a number of heavily subsidized coal mines in Europe, especially in Germany, may create opportunities for Eastern Canadian producers and bring about an expansion of the East Coast coal industry.

Canada should remain the market leader in potash and sulphur, with low costs and abundant, high-quality reserves. The cement industry will seek to expand its presence in the U.S. market. The asbestos industry has stabilized and, while regulatory threats remain, expects to maintain its export levels. The trade performance of smaller segments of the industry, such as dimension stone and peat moss, has made remarkable gains over the last few years, and trade missions to Asia have succeeded in developing new markets.

The thrust for sustainable development and increased international cost competitiveness has pushed innovative Canadian companies to the forefront of the industry. More and more, cost competition for Canadian producers comes from developing countries. Despite Canada being a high-wage country, Canadian companies are still regarded as among the most cost-competitive producers of minerals and metals, due to better management, the development and absorption of

new leading-edge technology, and the quality of the Canadian labour force. Over the last five years, the metals industry has invested more than \$1 billion in new plants and technology to meet today's environmental and productivity challenges.

The competition faced by Canadian minerals and metals companies is not limited to production costs, but also comes from substitutes and new materials. As a world leader, Canadian industry needs to actively promote the value-added benefits of its commodities, and to defend existing markets.

To meet these challenges, Canadian companies and governments are joining forces in collaborative research and development of processes, technologies and products that will minimize the environmental impact of the industry's activity, ensure that Canada remains a cost-competitive producer, and ensure that Canadian minerals and metals remain competitive in value-added benefit.

In summary, the leading international issues for the industry are:

- market access, including trade actions and regulatory frameworks, notably as they relate to the environment and health;
- market transparency and intelligence;
- cost competition from, and investment opportunities in, emerging and rapidly developing economies;
- the impact of an excess supply of metals and market disruptions resulting from exports from the FSU;
- the development and marketing of new and existing uses for products.

## Strategic Direction

### Market Access

The Canadian minerals and metals industry requires government support in international trade agreements and trade regulatory exercises. Specifically, the Government, in co-operation with industry, will undertake to:

- pursue a North American steel accord with the United States and Mexico, and continue to support open access to the U.S. market for the industry (Department of Foreign Affairs and International Trade [DFAIT]);
- ensure that the trade, environment and health regulatory initiatives pursued by international institutions and other countries balance environmental, health and economic considerations, and do not result in unnecessary barriers to trade or other discriminatory practices (Natural Resources Canada [NRCan], Industry Canada [IC], DFAIT);
- ensure that the conclusions of international health and environmental exercises covering the industry are based on sound science, and that they do not propose policies that could create unnecessary restrictions on the production, processing, marketing, trade, use and disposal/recycling of mineral and metal commodities (NRCan, IC, DFAIT);
- pursue technical or regulatory issues with important markets or competitors, or with countries that are potential allies or opponents on policy. The federal government, for example, places a priority on its bilateral minerals and metals working groups with countries such as the United States, Mexico, China, Korea, and with those in the EU, and on its relations with Japan (NRCan, IC, DFAIT).

### Market Transparency and Intelligence

The metals and minerals industry looks to government for support in obtaining reliable and up-to-date statistical supply and demand data, market information on countries where it has not traditionally been well connected, and in providing reliable worldwide industry and market intelligence. Specifically, the Government, in co-operation with industry, will:

- support and promote international study groups with producers and consumers for major mineral and metal commodities, especially with the full participation of the FSU, especially Russia (NRCan, IC, DFAIT);



- use information networks and arrange missions to obtain accurate and timely market intelligence on other countries' supply capabilities, their scientific and technological capabilities, and investment and market opportunities. The FSU republics' aluminum, nickel and potash industries will be a major target for these activities (NRCan, IC, DFAIT);
- use Canadian bilateral minerals and metals working groups and other bilateral mechanisms to obtain market and statistical information from countries like China and the FSU republics, which may represent market competition or opportunities for Canadian industry (NRCan, DFAIT).

### Trade Promotion

While the industry's large multinational companies do not generally require trade promotion support from the Government, there are segments of the industry where companies are small and do not have the resources or export experience necessary to penetrate foreign markets. Specifically, the Government, in co-operation with industry, will:

- undertake trade promotion activities in support of smaller industrial minerals producers with overseas market potential, such as the dimension stone and peat moss industries (DFAIT/missions, IC, NRCan);
- use its bilateral minerals and metals working groups and other bilateral mechanisms to obtain market information and identify export opportunities for Canadian industry. Activities will include missions, work through and with the Canadian diplomatic missions, and co-ordination with the provinces and industry organizations (DFAIT/missions, NRCan, IC);
- target activities at the Pacific Rim countries, including Japan, China and Korea, the Middle

East, Mexico and Latin American countries (NRCan, IC, DFAIT).

### Investment and Competitiveness

Ongoing federal government studies<sup>1</sup> continue to evaluate Canada's international competitiveness as a destination for foreign investment in mineral and metal processing. The Government also manages a program of international mining investment seminars to promote investment in Canada. During 1995-96, the Government, in co-operation with industry, will:

- conduct seminars in the financial centres of Pacific Rim and European countries to provide relevant information to potential foreign investors (NRCan, missions);
- monitor investment climate changes in countries that are significant competitors to Canada, to assess the need to adjust relevant domestic government policies (DFAIT/missions);
- conduct comparative studies to evaluate the evolving international competitiveness of the Canadian minerals and metals industry (NRCan, IC).

<sup>1</sup> Copies of these studies may be obtained from the Economic and Financial Analysis Branch, Mining Sector, Natural Resources Canada, 460 O'Connor Street, Ottawa K1A 0E4.





## Equipment and Services

Canada's large minerals and metals industry has spawned a cluster of supporting industries. Initially created to service the domestic market, many of these companies have grown and become part of a major Canadian high-technology exporting industry. Products include mining, mineral exploration, technology, processing and environmental equipment and controls, and consumable products. Services are broad, from engineering, maintenance and earth sciences to surveys, analyses, transportation, software, education and training, and management.

### International Environment

Internationally, Canada is regarded as a provider of technology in the minerals and metals fields. This image is particularly true for commodity producers (see the first section), in exploration services, in consulting engineering (including environmental protection), and in a number of product niches related to mineral and metal production and processing.

There is limited hard data on the size of the international markets for these industries. The world market for mineral exploration services is estimated at \$2 billion. Estimates indicate that Canadian firms have about a 30-percent share of that market, and have the \$300-million Canadian market essentially locked up. Canada is a world leader in several areas. One such area is airborne geophysics, in which Canada has captured 70 percent of the world market for surveys and 60 percent for equipment, software and data interpretation.

The world market for mineral and metal production and processing equipment is dominated by a handful of large firms, mostly from the United States, Sweden and Finland. This is particularly true for the very heavy equipment used for primary mineral extraction, handling and processing. Canadian firms have developed niches of excellence within this market, but do not generally offer a complete range of products for export. Exports from Canadian equipment companies are doing particularly well in South America.

Large multidisciplinary Canadian consulting engineering firms are strongly established internationally, and derive over half of their total billings from export sales.

International mining investment, including that by Canadian mining companies, is increasingly moving away from traditional destinations like Canada, the United States and Australia, toward new developing countries. These countries typically do not have a significant infrastructure of equipment and services suppliers and must rely heavily on imports, creating opportunities for exporters from more developed countries such as Canada. To prosper, Canadian equipment and services exporters must pursue these opportunities, particularly at a time when Canadian domestic exploration and mining investment are declining.

### Canadian Position

The services and equipment segment of the Canadian minerals and metals industry is made up of numerous small- to medium-sized companies. Like the international markets, hard statistical data to describe the domestic industry and its performance are quite limited.

Many of the companies in this field provide equipment and services that extend beyond minerals and metals. In addition to the mining industry, they may service the oil and gas, hydro-electrical, environmental and civil engineering industries.

Suppliers to the minerals and metals segment of the industry are increasingly aware of the need to further expand their export orientation. The Canadian Association of Mining Equipment and Services for Export (CAMESE) has, for example, quadrupled its membership in the last two years. It now has over 110 members, which represents about one third of all potential exporters in Canada.

CAMESE describes the industry as consisting of a total of 600 companies, many with annual sales of less than \$0.5 million and a few with sales of about \$100 million. The medians per company are approximately 25 employees engaged in mining supply activities, and about \$2 million in annual sales to the minerals and metals industry. Thus the industry has total sales of about \$1.2 billion (approximately 7 percent of the \$17-billion Canadian annual output of non-fuel minerals) and direct employment of 15 000 (15 percent of the 100 000 employed in the mining industry itself). Approximately 50 percent of the goods and services created in Canada for this industry are exported, and about half of the companies in the sector are currently exporting or producing exportable equipment and services.

The industry is widely scattered across Canada, with Ontario being the leading province, followed by British Columbia and Quebec. The companies often locate close to the mining industry, and are significant to the economies of Northern communities. The industry markets its equipment and services in Canada and in more than 50 other countries.

A number of the large Canadian-based multinational mining companies have major research and development (R&D) programs to develop advanced automation for mining. This effort is placing Canada at the leading edge of technology, and has already led to the development of a new generation of exportable equipment. Continued high levels of R&D funding, along with linkages to the equipment industry, should ensure more exportable spinoffs in the future.

Canada exports more consulting engineering services on a per-capita basis than any other country. The minerals and metals-related consulting engineering industry is a particularly strong segment of the industry. Expertise in resource projects, based on sophisticated domestic demand, gives it particular international credibility in this area.

For the largest Canadian firms in consulting engineering, export sales may represent 50 percent to 80 percent of total billings. Their global exposure provides Canadian machinery and instrumentation manufacturers with access to export markets. Among the largest firms are SNC Lavalin, Golder Associates, Monenco Agra, Acres, Kilborn, and Hatch Associates. The ability of these firms to compete internationally for large mining projects can create export opportunities for smaller Canadian equipment suppliers.

This industry sector can count on a number of strengths to expand its export performance, including:

- high levels of technology and product quality fostered by the competitive and demanding Canadian mineral and metals industry;
- competitive prices in response to the openness of the Canadian domestic market and the low Canadian dollar;
- Canada's international reputation as a technology provider and a world leader in minerals, metals and related industries;
- the export performance of the industry, with exports accounting for half of total sales;
- the opportunities for mining suppliers as Canadian mining companies expand their exploration and development activities in other countries.

The industry must also come to grips with certain weaknesses:

- there are 50 to 60 countries that are potential markets for the industry, but only the larger firms have the necessary resources to undertake a global effort.

- the Canadian market is too weak to support those that rely heavily on domestic sales.

## Strategic Direction

### Trade Promotion and Market Intelligence

While domestic markets for the industry are not expanding, international markets are growing rapidly. This poses a great challenge to an industry that is composed of small- to medium-sized firms with limited resources to compete on a global scale. Specifically, the federal government, in co-operation with the provinces and industry, notably CAMESE, will:

- identify foreign markets that offer the best export opportunities and should be considered priorities for trade promotion efforts (DFAIT/missions, NRCan, provinces, CAMESE);
- use information networks and formal linkages such as bilateral minerals and metals working groups to gather information on export opportunities, industry structure and practices in priority countries, and to promote the export of Canadian equipment and services (DFAIT, NRCan, IC);
- identify cost-effective ways of promoting exports (DFAIT, NRCan, IC, CAMESE);
- organize outgoing and incoming trade missions to promote Canadian exports (DFAIT/missions, IC);
- provide export training to smaller firms to help them develop their international marketing skills and strategies (provinces, CAMESE);
- ensure that Canada offers competitive financing packages in support of Canadian consulting firms bidding for large foreign mining projects (EDC, CAMESE, DFAIT).

Priority regions will include Latin America, the Asia-Pacific region and Southern Africa.

## Contacts

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235 Queen Street, 9th Floor East  
Ottawa K1A 0H5  
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Fax: (613) 954-3079

Natural Resources Canada  
Mineral and Metals Commodity Branch  
460 O'Connor Street  
Ottawa K1A 0E4  
Tel.: (613) 992-3084  
Fax: (613) 992-5244

## Minerals and Metals

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Mining Study	Apr-95	Lusaka	DFAIT	613-944-6586
Electra '95 Mission	Sep-95	Johannesburg	DFAIT	613-944-6590
Mining Mission from Southern Africa	Sep-95	Canada/Various	DFAIT	613-944-6590
Mining Mission to Southern Africa	Jan-96	Lusaka	DFAIT	613-944-6586
<b>Asia-Pacific South</b>				
Canada-China Ferrous Metals Working Group	Oct-95	China	NRCan	613-996-2499
Canada-China Non-ferrous Metals Working Group	Oct-95	Ottawa	NRCan	613-996-2499
Canada-Korea Mineral/Energy Working Group	10-Oct-95	Seoul	NRCan	613-996-2499
<b>Canada</b>				
Canada-Mexico Minerals/Energy Working Group	Apr-95	Ottawa	NRCan	613-995-9571
NRC - U.S. Bureau of Mines 10th Working Group Meeting	Apr-95	Ottawa	NRCan	613-995-9571
Western Canada Farm Progress Show - Info Booth	21-Jun-95	Regina	Manitoba	204-945-2428
APEC Coal Policy Seminar	Sep-95	Jasper	NRCan	613-992-8468
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Kazakhstan Mining Show - National Stand	Jun-95	Almaty	DFAIT	613-992-8590
Forestry, Food, Mineral Products Mission	Jun-95	Moscow	DFAIT	613-996-6429
<b>East Asia</b>				
Canada-Korea - Third Markets Study	May-95	Seoul	DFAIT	613-996-2807
Canadian Architect/Designer Mission	Jun-95	Taipei, Taichung	IC	613-954-2956
Coal Mission from East Asia	10-Sep-95	Toronto	DFAIT	613-995-8744
Mineral Investment Seminar	10-Oct-95	Seoul	DFAIT	613-996-2807
International Geological Congress - National Stand	Aug-96	Beijing	DFAIT	613-996-6987
<b>Latin America and the Caribbean</b>				
Tecnomin '95 - National Stand	Apr-95	Lima	DFAIT	613-996-4199
National Mining Congress - National Stand	Oct-95	Acapulco	DFAIT	613-995-8742
International Copper Study Group (3rd General Session)	23-Nov-95	Santiago	NRCan	613-992-4093
CAMESE Mission	Dec-95	Mexico	DFAIT	613-995-8742
Prospectors and Developers Mission from Venezuela	Mar-96	Toronto	DFAIT	613-996-5548



Activity	Date	Location	Dept.	Contact
<b>Multiple Markets</b>				
Minerals and Metals Investment Seminars	TBD	Europe, Asia	NRCan	613-992-5873
Working Group of Experts on Aluminium	Spring 95	Oslo	IC	613-954-1854
International Lead/Zinc Study Group (ILZSG)	01-Apr-95	London	NRCan	613-992-4403
International Copper Study Group (ICSG)	20-Jun-95	Lisbon	NRCan	613-992-4482
Powder Metallurgy - TEC '95 World Congress (Conference)	14-May-95	Seattle	IC	613-954-3118
International Lead/Zinc Study Group (ILZSG)	27-Oct-95	Geneva	NRCan	613-992-4403
International Copper Study Group (ICSG)	Nov-95	Santiago	NRCan	613-992-4482
<b>United States</b>				
Dimension Stone Mission	Mar-95	California	B.C.	604-844-1912
Empire Farm Days	Aug-95	Buffalo	DFAIT	613-944-5149
American Institute of Architects - Trade Show - National Stand	Nov-96	Minneapolis	DFAIT	613-944-7486
<b>Western Europe and European Union</b>				
Canada-EU Metals and Minerals Working Group	Apr-95	Brussels	NRCan	613-995-2096
International Nickel Study Group (INSG)	25-Apr-95	The Hague	NRCan	613-992-4481
OECD Steel Committee	10-May-95	Paris	IC	613-954-1488
Mission-Agricultural Machinery (Tech Transfer)	Nov-95	Hannover, Paris	IC	613-954-3226
OECD Steel Committee	28-Nov-95	Paris	IC	613-954-1488
Outgoing Mission - Agricultural Machinery	Nov-95	Hannover, Paris	IC	613-954-3226
Oceanology International '96 - National Stand	Mar-96	Brighton	IC	613-954-3398
International Nickel Study Group (INSG)	02-Nov-95	The Hague	NRCan	613-992-4481



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Government  
of Canada

Gouvernement  
du Canada

Canada

# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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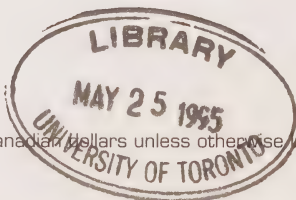
***An Integrated Plan for Trade, Investment  
and Technology Development***



**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- Overview
- 1. Advanced Manufacturing Technologies
- 2. Agriculture and Food Products
- 3. Aircraft and Parts
- 4. Automotive
- 5. Biotechnologies
- 6. Business, Professional and Educational Services
- 7. Chemicals, Plastics and Advanced Materials
- 8. Construction Products
- 9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
- 10. Cultural Industries
- 11. Defence Products
- 12. Environmental Equipment and Services
- 13. Fish and Sea Products
- 14. Forest Industries
- 15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
- 16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
- 17. Minerals and Metals
- 18. Oil and Gas Products and Energy Equipment
- 19. Power Equipment
- 20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
- 21. Rail and Bus Equipment
- 22. Space
- 23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**



All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Produits pétroliers et gaziers, et matériel d'exploitation de l'énergie.*



## Oil and Gas Products and Energy Equipment

The manufacturers of oil and gas products and energy equipment produce a wide variety of machinery and components used to explore for oil and gas deposits, to drill and service wells, and to produce and initially process oil and gas in the field. The industry encompasses manufacturers of geophysical prospecting equipment; drilling rigs and ancillary tools; pumping, cementing and well-fracturing units; and dehydrators, separators, treaters and other field-processing components. It also includes drilling and processing equipment on offshore platforms, but does not include the platforms or the undersea equipment. In addition, manufacturers supply custom-made equipment, such as drilling rigs and field-processing units, plus a wide range of standard products and high-volume production items.

### International Environment

World primary energy demand is projected to increase by 48 percent between 1991 and 2010, according to the International Energy Agency's (IEA) World Energy Outlook. East Asia will be the fastest-growing region over this time period, with an annual demand growth rate of 4.9 percent, compared with a world average of 2.1 percent.

According to the IEA, the rising standard of living is the major reason for the anticipated growth in Asian demand. Industry was the key sector driving growing energy demand in the 1970s and 1980s, and although it continues to grow, it has been overtaken by transport and residential demand.

China's energy demand rate is expected to grow by 4.1 percent annually as increasing urbanization leads to greater consumption, especially in the transport sector. Oil demand is expected to grow at 5.4 percent per annum. Although China's Tarim Basin provides potential for greater domestic oil production, the country is still expected to be a large net importer in 2010.

Latin America is also expected to have a relatively high rate of growth in primary energy demand, also due to increasing urbanization and private consumer demand.

In contrast, countries of the Organization for Economic Co-operation and Development (OECD) are expected to feel the effect of the deep

economic depression and, consequently, will have much lower demand growth rates. The average from 1991 to 2010 is expected to be 1.3 percent.

IEA projections point to the Pacific region (Japan, Australia and New Zealand) as likely to have the highest growth in the OECD. Japan will lead the way in this region, with demand for liquefied natural gas (LNG) expected to grow as it gradually replaces oil as a source of power generation.

The countries of the former Soviet Union (FSU) will see the lowest growth, with a rate of 0.1 percent over the 20-year period, as they adjust to the changes brought on by the move toward market economies. Central and Eastern Europe, after an initial shrinkage in energy demand, will recover and growth will average 1.3 percent (see Figure 1).

Consequently, total world output for oil and gas equipment is estimated at US\$30 billion per year. With capital spending by international oil and gas producers expected to approach US\$200 billion per year for the next five years, growth in the oil and gas equipment sector is expected to remain high. Much of this business will be directed toward suppliers of exploration and development drilling equipment, plants and transportation systems.

While oil and gas well drilling is declining in the United States, important gains in petroleum drilling and production are taking place in Venezuela, Saudi Arabia, the Commonwealth of

Independent States (CIS), Norway, Colombia, Argentina, the North Sea, India, China and Iran. Many of the major oil companies, including smaller Canadian firms, are expanding their exploration and production budgets for foreign operations. In addition, many countries (such as India) are making changes to their legal and business practices. These modifications (e.g. privatization) are attracting significant Western participation.

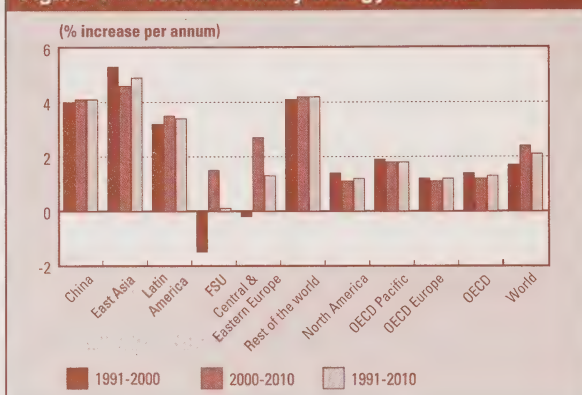
A large portion of the demand for petroleum equipment is from oil and gas companies that are owned or controlled by government. Occasionally, the granting of a government licence to explore for petroleum is linked to the purchase of locally produced petroleum equipment.

Foreign markets are expected to take a larger share of this industry's output in the long term (see Figure 2). Oil companies are likely to spend a large portion of their exploration and development expenditures outside North America. The desire of many foreign petroleum-producing countries to earn hard currency through petroleum exports should encourage them to reduce restrictions on foreign investment and imports of petroleum equipment.

The development of new drilling and production techniques will stimulate the design of more productive oil field equipment. Further refinements in three-dimensional survey equipment, measurement while drilling (MWD) instruments and horizontal drilling machinery will likely improve the productivity of drilling rigs. The increase in the use of coiled tubing for well-servicing and -drilling operations is also expected to continue.

The worldwide market for oil and gas exploration and production (E&P) equipment and services (excluding China and the CIS) was \$45 billion in 1993, and is expected to grow to \$1.2 trillion over the next two decades. Canadian suppliers can capture \$60 billion or 5 percent of that market.

**Figure 1 — World Primary Energy Demand**



Source: IEA

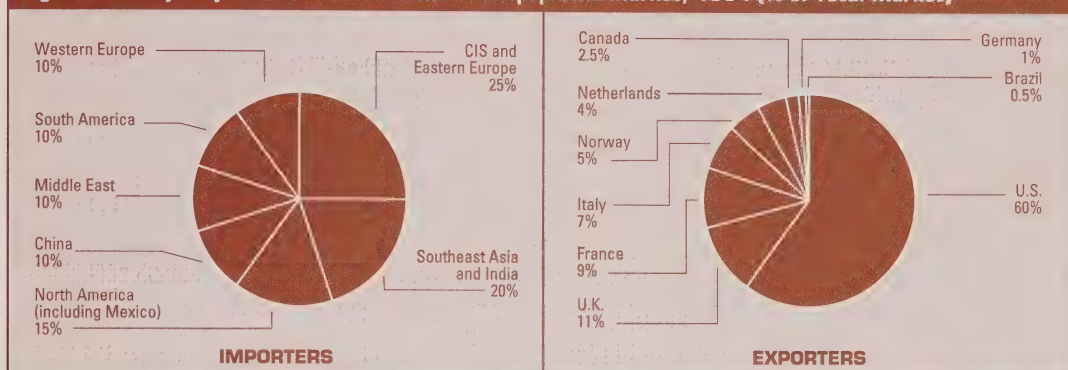
Perhaps the most compelling factor in favour of E&P equipment exports to developing countries is the rapid pace of technological change. Many developing countries need to maintain oil production to earn foreign exchange, and cannot afford to wait for development of their domestic technical expertise.

## Canadian Position

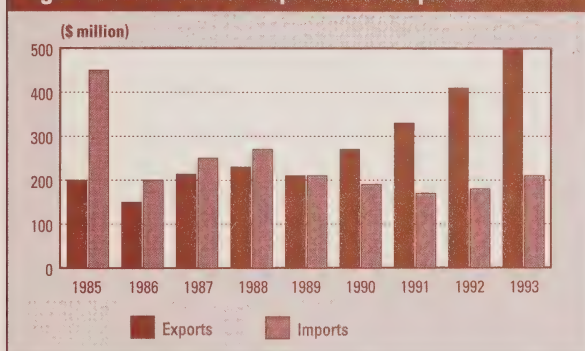
The Canadian oil and gas equipment industry is composed of approximately 220 small- to medium-sized establishments employing a total of about 5000 people, including many skilled workers and professionals. In 1993, shipments were estimated at \$1.2 billion. Of this total, \$500 million or 41.6 percent were exports (see Figure 3).

Canada's share of the world export market in 1994 was approximately 2.5 percent (see Figure 2). Canadian imports were estimated at \$210 million, representing 29 percent of the domestic market. About 97 percent of imports came from the United States.

About 9400 wells were completed in Canada in 1993. The forecast for 1994 is about

**Figure 2 — Key Players in the Oil and Gas Field Equipment Market, 1994 (% of Total Market)**

Source: Industry Canada

**Figure 3 — Canadian Exports and Imports**

Source: Industry Canada

11 400 wells, with total spending for drilling and completions estimated at \$3.2 billion.

The Canadian industry is strong in the areas of technology, product quality and after-sales service, particularly in specialized equipment developed to accommodate Canada's resource characteristics (sour gas, heavy oil and oil sands).

Canadian firms have developed advanced technologies related to drilling as well as specialized recovery and processing products, often in co-operation with their key customers. These advanced technologies include automatic

computer controls to reduce manual labour, to optimize processes and performance, and to improve safety in operations on the rig floor. With a solid track record, Canadian firms have created the confidence in their equipment that is needed to gain and sustain markets based on a reputation for supplying high-quality products.

The sector has increased its productivity over the past 10 years by rationalization, by installing more automated production equipment, and by a variety of other production improvements. Numerous cost-reduction programs have been successfully implemented. As a result, the sector has been able to maintain its viability and expand exports, despite the downturn in equipment requirements.

Despite its small world market share, the Canadian oil field manufacturing industry is recognized as one of the leading suppliers of niche advanced petroleum equipment and technologies in the following areas:

- Canada is a world leader in specialized mining equipment for extracting oil sands (for example, heavy-duty draglines) and sour gas gathering and treatment facilities. In the field of sour gas, Canada's expertise is unparalleled. Because of the high concentration of hydrogen sulphide ( $H_2S$ ) in a number of its fields,



Canada has developed some of the largest and most efficient gas plants in the world, and has become the world leader in sour gas technology for sweetening, dehydration, cryogenic natural gas liquids recovery, and sulphur processes. Canadian equipment designed especially for heavy oil, sour gas and tar sands is being exported to other nations that have similar reserves, such as India, the People's Republic of China and the CIS.

- Canadian manufacturers of petroleum equipment have extensive experience in providing technical expertise, training and advanced technologies to foreign countries with difficult oil formations. This fact is likely to stimulate exports.
- Canadian firms have developed specialized techniques and equipment for secondary recovery from wells that have reached a low rate of productivity (e.g. well stimulation by fracturing equipment and thermadrive boilers).
- Canadian companies have also made major advances in the development of top motor drives, winterized drilling rigs, directional and horizontal drilling techniques, computer-controlled automatic coring controls and automatic pipe-handling systems.

Financial, institutional and regulatory barriers to the sale of Canadian supplies vary regionally. Because relatively few OECD countries have enough oil and gas reserves to support a major oil industry, there will be few sales to major Canadian trading partners such as Germany and Japan.

Most of the E&P equipment sold abroad by Canadian firms is manufactured in Canada, although the trend is changing toward manufacturing locally in the country of operation.

The CIS is the most attractive market, since its economy has developed a high degree of reliance on oil production and oil exports that may be difficult to sustain without state-of-the-art technology. Three major barriers impede participation by private firms: the chaotic state of the economy, the difficulty of expatriating profits and getting

paid in hard currency, and the laws restricting private ownership.

The international market for oil field equipment will be stimulated by technological advances and product improvements. The opportunities are greatest for those firms that have the experience and technology to develop and exploit a specialized market niche, as well as those producing small, custom-designed process plants.

To penetrate foreign markets, Canadian oil and gas equipment companies are establishing foreign subsidiaries and joint ventures in the United States, Europe, Latin America, the CIS, India and Southeast Asia. In addition, manufacturers are establishing a worldwide network of agents, distributors and service companies to ensure that parts and services will be readily available to foreign customers. In general, developing countries wish to maintain or expand their petroleum production while increasing their portion of the value-added domestically. This should assure growth for Canadian equipment exports.

The major export market opportunities for Canada during the 1990s will be the Middle East, including Saudi Arabia and Iran, East Asia (China and Viet Nam), Mexico, the CIS, some South American countries (Colombia, Argentina, Peru and Bolivia) and Africa. Canadian companies can also expect to benefit from increased business opportunities in the Eastern Bloc countries, which have recently made changes to their laws regarding ownership and joint ventures. This applies to Poland, Hungary and Romania, which all have indigenous oil and gas industries. Norway also presents major opportunities for Canadian companies, with exploration development, production and pipeline investments exceeding \$11.5 billion in 1993.

Opportunities exist in the CIS for Canadian oil and gas machinery, equipment and technology that has been designed for Northern Alberta and the Arctic. The Shtokomanovskoye gas field in the Northern Barents Sea will cost \$20 billion to develop. In Western Siberia's Tyumen province



alone, only 150 of the 530 known oil and gas deposits are developed and producing. At least 25 000 Russian wells are out of service, and an estimated 1000 drilling rigs would be required to restore production to 1982 levels.

In the area of investment prospecting (strategic alliances), efforts should be targeted at the United Kingdom, France, Italy, Germany and Norway, as firms in these countries are willing to establish base activities in North America. In addition, alliances can help to overcome certain practices that hinder Canadian sales in these markets.

## Strategic Direction

The strategic priorities for the oil and gas products and energy equipment industry are shaped by the following bases of international competition:

- technological expertise in certain niche markets where Canadian firms have developed a superior product;
- the availability of complementary services, such as engineering and training;
- price competitiveness;
- a physical presence in the market;
- a proven international track record.

The key to the long-term growth of the Canadian oil patch relies on the successful expansion to countries with a strong and dynamic petroleum industry.

The Government, in co-operation with industry, will:

- organize and participate in recognized trade fairs outside Canada, including Offshore Europe in Aberdeen, Scotland and Neftagaz in Moscow, to increase export sales by 15 percent (Department of Foreign Affairs and International Trade [DFAIT]);
- organize and participate in incoming missions of foreign buyers to meet with Canadian firms,

particularly in conjunction with Inter-Can 95 (DFAIT/missions, Petro-Trade);

- continue to identify investment opportunities and transfer foreign technologies and products (technology acquisition and transfer) through missions to and from countries such as France, the United Kingdom, Norway, the United States, Germany and Italy (IC, DFAIT/missions);
- in accordance with the memorandum of understanding (MOU) signed in 1993, work with the Petroleum Services Association of Canada (PSAC) to establish a presence abroad, and with Petro-Trade to encourage Canadian firms in this sector, either by opening offices directly or by hiring Canadian expatriates who have worked in the market as local representatives in the key markets. A local representative representing two to three Canadian companies can be a financially advantageous compromise for medium-sized companies (IC, PSAC, Petro-Trade);
- through the Program for Export Market Development (PEMD), encourage and help firms undertake more market opportunity analysis and identification, in order to develop a substantial, long-term and sustained presence in targeted foreign markets (IC, DFAIT);
- building upon Phase I of a market study for Southeast Asia, help PSAC and Petro-Trade to undertake Phase II. This will involve extensive consultations with industry and PSAC members to develop export strategies that are consistent with opportunities, supply capacity and global trade development activities (IC, DFAIT, PSAC, Petro-Trade);
- in evaluating export projects and building on Canadian know-how, place more emphasis on projects that highlight Canadian technology and expertise such as sour gas, heavy oil and secondary recovery projects (IC);
- through targeted visits to key markets and in collaboration with missions, deliver foreign market/project opportunity information, as

well as strategic information and analysis, to Canadian business (IC, DFAIT/missions);

- organize and participate in outgoing missions of Canadian firms to key countries such as Indonesia, Viet Nam, the CIS, Saudi Arabia, China and Iran (IC, DFAIT/missions);
- promote the involvement of Canadian suppliers in energy sector projects financed by international financial institutions (IFIs) by:
  - identifying projects in priority markets for which Canadian suppliers and technology are well suited;
  - providing project information to Canadian firms and trade associations as soon as it is available;
  - holding seminars across Canada on how to pursue IFI projects;
  - promoting the use of Canadian trust funds to finance studies in oil and gas/energy sectors (DFAIT/missions, IC).

## Contacts

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Fax: (613) 943-8820

## Oil and Gas Products and Energy Equipment

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Bahrain Oil Show: Info Booth	Apr-95	Manama	DFAIT	613-944-6983
Moroccan Gas Mission: Incoming	Oct-95	Canada/Various	DFAIT	613-944-0396
Oil and Gas Mission to Chad & Cameroon	Nov-95	Yaoundé	DFAIT	613-944-6579
Market Study - Oil and Gas - Iran	Feb-96	Tehran	IC	613-954-3192
Oil and Gas Mission to Egypt and Israel	Feb-96	Cairo, Tel Aviv	DFAIT	613-944-6994
Oil and Gas Mission to Hassi Messaoud	Feb-96	Algeria	DFAIT	613-944-8134
Mediterranean Oil/Gas Exhibition & Conference - Mission	Feb-96	Valetta, Malta	DFAIT	613-944-8134
Oil and Gas Technical Show: Info Booth	Mar-96	Dubai	DFAIT	613-944-6983
Incoming Buyers from Iran to National Petroleum Show	Jun-96	Calgary	IC	613-954-3192
National Petroleum Show 1996 - Incoming Gulf Visitors	Jun-96	Calgary	DFAIT	613-944-6983
<b>Asia-Pacific South</b>				
Technical Seminar to Viet Nam	TBD	Hanoi, Ho Chi Minh	IC	613-954-3192
MOGPÉE '95: Info Booth	Jun-95	Kuala Lumpur	DFAIT	613-996-5824
Incoming Mission from Asia/South Pacific	Jun-95	Calgary, Edmonton, Ottawa	DFAIT	613-992-0952
<b>Canada</b>				
Inter-Can '95	Jun-95	Calgary	DFAIT	403-292-6409
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Oil and Gas '95 Trade Fair: National Stand	Oct-95	Kiev	DFAIT	613-944-1437
Neftagaz '95: National Stand	Oct-95	Moscow	DFAIT	613-996-6429
KIOGE (Oil and Gas Exhibition): National Stand	Oct-95	Kazakhstan	DFAIT	613-992-8590
<b>East Asia</b>				
Canada-China Heavy Oil Tech Seminars/Symposium	Oct-95	Beijing	DFAIT	613-996-6987
SPE '95: National Stand	Nov-95	Beijing	DFAIT	613-996-6987
National Petroleum Show - Incoming Visitors from China	Jun-96	Calgary	DFAIT	613-996-6987
World Petroleum Congress '97: National Stand	May-97	Beijing	DFAIT	613-996-6987

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
<b>Latin America and the Caribbean</b>				
Expetro AIPM: Info Booth	Apr-95	Veracruz	DFAIT	613-995-8742
Heavy Oil Mission from Latin America	May-95	Calgary, Edmonton	DFAIT	613-996-5548
National Oil Show: Info Booth	Jun-95	Port of Spain	DFAIT	613-943-8807
Argentina Oil and Gas Expo '95: Info Booth/Mission	Oct-95	Buenos Aires	DFAIT	613-996-5549
Society of Petroleum Engineers: Congress and Expo	Oct-95	Veracruz	DFAIT	613-995-8742
Mexican Chemical Engineers' Conference: Info Booth	Oct-95	Mexico	DFAIT	613-995-8742
Petroleum Show: Mission from Latin America & Caribbean	Jun-96	Calgary	DFAIT	613-996-3877
Oil & Gas Mission from Mexico	Jun-96	Calgary	DFAIT	613-995-8742
<b>United States</b>				
Offshore Technology Conference - National Stand	May-95	Houston	DFAIT	613-944-7486
Directory of Canadian Oil & Gas Equipment Suppliers	May-95	Ottawa	DFAIT	613-944-7486
<b>Western Europe and European Union</b>				
Offshore Europe: National Stand	05-Sep-95	Aberdeen	DFAIT	613-995-4730
Strategic Alliance Program with European Firms	05-Sep-95	Aberdeen	IC	613-954-3192
Oil and Gas Mission from Norway	Feb-96	Calgary, St. John's	DFAIT	613-995-4730
National Petroleum Show: Buyers from Western Europe	Jun-96	Calgary	DFAIT	613-992-7021

## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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# **CANADA'S EXPORT STRATEGY**

## ***The International Trade Business Plan***

**1995/96**

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

- Overview
- 1. Advanced Manufacturing Technologies
- 2. Agriculture and Food Products
- 3. Aircraft and Parts
- 4. Automotive
- 5. Biotechnologies
- 6. Business, Professional and Educational Services
- 7. Chemicals, Plastics and Advanced Materials
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- 9. Consumer Products
  - Apparel and Fur
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  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
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- 23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**



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## Power Equipment

The power equipment sector comprises diverse subsectors producing a wide variety of products and services, including equipment for hydro-, thermal- and nuclear-generating stations; power transmission and distribution equipment; electrical wire and cable products; power and distribution transformers; control and protection equipment; power-conversion equipment; electric motors; alternative energy, for example from solar and cogeneration; standard and advanced technology batteries; and fuel cells.

Electrical utilities and the construction, mining and manufacturing industries are the largest markets for the sector. Most electrical products are made for utilities, and it is in these products that Canada is most competitive internationally. The focus here will therefore be on utility products.

### International Environment

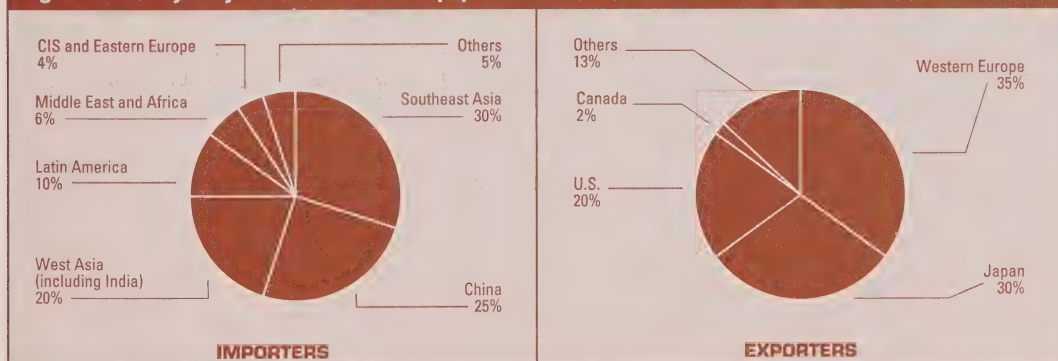
Economic expansion cannot occur without electrical power. Power supply and electrical equipment needs grow, on average, at about the same rate as economic growth.

The global electrical equipment industry will continue operating in two distinct international growth environments:

- the slow-growth developed world has indigenous, mature electrical manufacturing industries that will continue operating in surplus capacity in the 1990s;
- the developing world, lacking sufficient developed industries to meet growth demands, will continue to import electrical equipment from the developed world. Engineered equipment and systems such as large generation and high-voltage transmission equipment will be particularly needed, especially in high-growth Asia (see Figure 1).

Current electric generating capacity in the world totals nearly 2800 gigawatts (or 2800 billion watts). Nearly 40 percent of that capacity is in Eastern and Western Europe. The United States and Canada account for about 26 percent. The remaining one third is spread through Asia, Africa

**Figure 1 — Key Players in the Power Equipment Market, 1993 (Estimated % of Total Market)**



Source: Industry Canada

and Latin America. Highly developed and heavily electrified Western Europe and North America will grow slowly in electricity needs. By contrast, the existing relatively low electrical capacity in the developing world will be substantially expanded.

For the balance of the decade, a growth of about 800 gigawatts, an increase of over 30 percent, is expected worldwide. This will require about US\$3 trillion in electrical equipment.

The largest potential new market lies in Asia, which will experience a third of the world's total increase in capacity by the end of the decade. There, the addition of 250 gigawatts will increase present capacity by about 50 percent. The largest expansion in electrical systems will probably be in China, growing at about 9.5 percent per year, or 18 000 MW. Strong growth is also expected in other Asian countries, especially India, Viet Nam, Cambodia, Korea, Taiwan, and the Southeast Asian nations.

Africa, Latin America and the Middle East, in the earlier stages of economic and industrial development, also have a great need to add electric power, but the combined capacity growth rate (about 4.2 percent) will be much lower than in Asia.

In the United States, the emphasis will be on refurbishing and upgrading existing power plants and transmission systems. The U.S. utilities are trying to hold down major investments in new plants and equipment. As a result, only a 2-percent annual growth rate is expected for the balance of the decade in the United States. Despite the slow growth overall, there will be strong new demand for certain equipment needed for upgrading.

Almost two thirds of all U.S. utility-generating facilities is 20 years old, and nearly one third is at or near the end of their originally expected economic life. Since the mid-1970s, U.S. authorities have cancelled nuclear construction projects and no new nuclear reactors have been ordered. This places even greater demands on fossil-fired plants, even though these facilities face increasingly stringent environmental restrictions. There will also be a heavy emphasis on combined cycle and

gas turbines, especially with the availability of reasonably priced natural gas.

Market growth will also be low in Europe, about 1.8 percent per year, for a total increase of about 200 gigawatts by the end of the century. While this will be a relatively small percentage increase for Europe, in absolute terms it represents about a quarter of the total growth worldwide. The greatest market potential will likely be in Eastern Europe, which desperately needs electrical power to support economic expansion. It also needs to upgrade and replace many old and inefficient power plants.

The developed world will be concentrating on improving overall efficiency in generation, transmission and distribution, utilizing exciting new technologies.

Near- to mid-term opportunities for Candu nuclear reactor sales exist in Turkey, China, Korea and other markets. Strategic alliances will be necessary to win these orders; partners with the ability to bring competitive export project financing will have a major advantage.

By far the largest power equipment market is electricity transmission and distribution equipment (about half of total demand). The remaining half of world demand is for boilers (15 percent), steam turbines (12 percent), hydroturbines (5 percent), nuclear reactors (5 percent), and emission control equipment (4 percent).

## Major Trends

The following trends are altering the nature of the global electrical equipment market:

- an oversupply of electricity in much of the developed world, and a corresponding under-supply in much of the developing world;
- a large increase in the requirement for higher efficiency equipment to replace and refurbish older power plants and systems;
- a strong worldwide emphasis on energy conservation, which will continue to reduce utilities' new construction needs. Although the conservation ethic is strongest in the developed



world, it has also been adopted in the developing world (especially Thailand, the Philippines, China and Mexico) to help alleviate their need for high energy growth;

- increased emphasis on equipment and systems for improving electrical system efficiencies, resulting in more sophisticated high-technology equipment, especially electrical control equipment;
- increased training needs to adapt to the more sophisticated high-technology equipment;
- a substantially increased demand for alternative energy equipment and systems, especially in the areas of cogeneration, solar power and wind systems. (Some analysts predict the production of significant numbers of electric automobiles within the next decade);
- competitive financing, which will remain a major factor in project competitiveness, while concessional financing by governments will play an increasingly less important role. Financial expertise, especially risk assessment and risk dispersement, will be more important in the future, and private power projects (PPP) and the build, operate and transfer (BOT) technique will become increasingly important in capital equipment export projects;
- increased manufacturing capabilities in the developing countries, of which many, including China, India and Brazil, are projected to be self-sufficient by the year 2020;
- continued manufacturing rationalization with increasing efficiencies on a global basis, including:
  - a major restructuring of the industry, particularly within the European Union (EU) and North America,
  - production continuing to shift to quality, low-cost producers, especially for more labour-intensive equipment production,
  - larger multinational manufacturers that produce most of the industry's output continuing to downsize in terms of employment,

- some plant closings perhaps occurring in Europe and North America as production continues to be relocated to Asia;

- changes in legal and business practices such as privatization which are attracting Western participation in many developing countries such as Malaysia, Pakistan and India;
- an increasing trend to transnational alliances and partnerships as a means of maintaining international competitiveness;
- a gradual harmonization of electrical standards worldwide, reducing these non-tariff barriers to trade; and
- global competition, always fierce in the past, has become even more so with slow growth in Western countries.

## Canadian Position

The electrical equipment manufacturing industry in Canada employs approximately 80 000 people and ships about \$9 billion in products annually, \$2 billion of which are exports. While shipments have declined since the beginning of the recession, a recovery is under way with output in 1993 showing a marginal increase over 1992. The industry's productivity and international competitiveness continues to increase substantially, as do exports.

Manufacturers can be divided into two categories: small- and medium-sized, Canadian-owned firms producing specialized products for niche markets; and large, foreign-owned multinational companies. Successful exporting subsidiaries have world product mandates. In some cases, exporting by the subsidiary is limited to Canadian-financed or co-financed projects.

The Canadian domestic market has suffered in recent years with the cancellation of large power projects, the strong trend to conservation and slow economic growth in general. As a result, exports have become increasingly important for the survival of the industry.

## Strengths

Canada has developed an international reputation and image as a reliable supplier of high-quality products with the most advanced technologies. Canada is most competitive in custom-made and specialty electrical products, especially larger generation and transmission equipment, including:

- hydro generators and turbines;
- gas and steam turbines;
- power plant ancillary equipment;
- custom specialty electrical products and systems;
- replacement and retrofit equipment;
- industrial and utility boilers;
- nuclear reactors and associated equipment for nuclear plants;
- medium- and large-power transformers;
- capacitors;
- circuit breakers;
- support insulators;
- disconnect switches;
- power shunt reactors;
- specialty wire and cable;
- control and protection equipment;
- stationary- and mobile-engineered substations;
- hydro power station control and supervisory equipment;
- supervisory control and data acquisition (SCADA) equipment.

Research and development (R&D) activities have allowed many Canadian firms to become competitive in these areas. R&D activities in the provincial electrical utilities have been especially productive in developing competitive, state-of-the-art equipment. The utilities of Ontario, Quebec and British Columbia have large well-equipped R&D divisions with world-class testing facilities, and the industry works closely with these provincial utilities for R&D in electrical products. Atomic Energy of Canada Limited (AECL)

operates two large research facilities in Ontario and Manitoba.

Alternative energy sources such as solar, cogeneration and fuel cells, are also drawing renewed interest. Those subsectors involved in energy savings and improved system efficiencies are growing rapidly.

A number of world-competitive products have been developed in Canada, where subsidiaries have been granted world product mandates. The products include gas turbines, hydro turbines and generators, and high-voltage cold-climate SF-6 switchgear. Canadian subsidiaries have also benefited from access to state-of-the-art technology developed in large U.S. and European R&D facilities. Smaller, independent manufacturers have been able to acquire and then develop their own technologies through international licensing arrangements and other types of alliances.

Product quality is also a major strength of Canadian companies and has been a key in competing against Japanese and European manufacturers in Third World power-sector markets. The Canadian Standards Association's (CSA) stringent requirements for Canadian manufacturers and the quality standards required to cope with Canada's severe operating conditions are recognized worldwide by electrical equipment buyers.

## Challenges to Exporting

Even with the many competitive strengths that Canada enjoys, Canadian firms face many challenges in adapting to the trends and global changes affecting the industry:

- Canadian firms must adopt more BOT and build, operate, own and transfer (BOOT) techniques rapidly being employed worldwide for power projects;
- funds available from international financial institutions (IFIs) such as the World Bank and the Asia Development Bank are not sufficiently utilized by Canadian firms. As Canada is a significant financial contributor to these banks,

Canadian firms are eligible to bid on procurement opportunities arising from more than US\$40 billion loaned annually to developing countries. IFI bidding processes are designed to ensure fairness between countries, and provide companies with a convenient and cautious entry to unfamiliar markets;

- the industry continues to work with government and trade unions on the difficult challenge of developing the skilled trades people and technologists that the industry needs to remain competitive internationally;
- there is a need to increase the exposure of many small- and medium-sized enterprises (SMEs), which make up most of the sector, to innovative techniques and export strategies;
- many firms are small, undercapitalized and still carry heavy debt loads incurred during the 1980s. Consequently, they often lack the resources to carry out extensive research and promotional programs;
- "Buy America" policies remain a non-tariff barrier to the U.S. utility market and have resulted in some companies establishing U.S. subsidiaries to ensure that they remain eligible to sell in that country. In addition, many U.S. states have employment or procurement legislation giving their manufacturers preference over out-of-state suppliers;
- Western European and Japanese markets remain largely closed to Canada due to local competition and non-tariff barriers;
- competitive project financing is a constraint to exporting, especially where foreign governments support their firms with mixed credits and/or concessional financing;
- Canadian firms entering developing country markets must:
  - be prepared to compete aggressively against stiff European, Japanese and U.S. competition,

- take the long-term strategic approach and devote the resources necessary for a sustained marketing effort over a period of years,
- consider a local agent as essential in dealing with local buyers,
- work with other Canadian and foreign suppliers to create competitive packages,
- be prepared to enter joint ventures to establish local manufacturing facilities and service support;
- new exporters of electrical equipment, accustomed to North American business practices, will need to adapt to different and unfamiliar business practices in foreign markets.

### Geographic Priorities

The greatest potential new markets for Canadian electrical equipment are the burgeoning power sectors of the developing countries in Asia, South America and the Middle East, in particular:

Asia: Pakistan, India, Thailand, China, Sri Lanka, Nepal, Bangladesh, Republic of Korea (mainly nuclear reactor islands), Taiwan, Malaysia, Indonesia, the Philippines, New Zealand, Viet Nam, Laos and Cambodia;

Latin America: Mexico, Colombia, Chile, Brazil, Argentina and Venezuela;

Africa and Middle East: Israel, Gaza, Iran, Saudi Arabia, Turkey, Egypt, Algeria and Cameroon.

The Canadian industry must export to survive, especially with the slower-growth domestic market of the 1990s. Canadian suppliers should be in a position to capture about \$22 billion, or about 1 percent of the total world market during the 1994-2000 period. The implementation of the North American Free Trade Agreement (NAFTA) on January 1, 1994, has opened up new markets in the growing Mexican power sector, and will continue to expand Canadian exports to the United States. While the U.S. is our largest existing market, most of the future expansion will take

place in developing countries, particularly in the Pacific Rim, where Canadian firms are experiencing success. The demand for electrical power equipment in these countries will directly depend on their continued economic growth.

Canada's power generation (hydro, thermal and nuclear) and transmission equipment industries and services remain the only viable sources of the new power and energy needed to advance the developing Third World until viable alternative technologies are found, likely well into the next century.

## Strategic Direction

The following measures are intended to assist in substantially increasing exports from the Canadian electrical sector over the next few years:

- increased participation by SMEs in government export planning, through annual government-industry consultation on the International Trade Business Plan (ITBP) (Industry Canada [IC], Department of Foreign Affairs and International Trade [DFAIT]);
- continued emphasis on the gathering of market intelligence and its distribution to the industry (IC, DFAIT);
- encouragement of more collaborative, "Team Canada" approaches to facilitate competitive bids on large power projects in developing countries. Canadian competitiveness on projects will be maximized, where appropriate, by limiting Canadian financial assistance per project to one competing Canadian consortium. (IC, Export Development Corporation [EDC], Canadian International Development Agency [CIDA], DFAIT);
- encouragement of Canadian exporters to make more use of DFAIT's specialist knowledge of IFIs and to contact trade commissioners and executing agencies in the countries in which IFI projects will be undertaken (IC, DFAIT);
- use of existing initiatives such as Industry and Energy Research and Development [IERD], and Industrial Research Assistance [IRAP] programs, to support emerging electro-technologies, especially those involved with energy savings, alternative energy and improved electrical system efficiencies (IC, Natural Resources Canada [NRCan], National Research Council [NRC]);
- enhancement of the collection and dissemination to the industry of high-quality market intelligence. Increased international exposure of Canadian firms through targeted participation in trade missions, trade fairs, and international conferences (IC, DFAIT/missions);
- avoidance of duplication of federal and provincial export-promotion efforts through mutual representation at respective export planning meetings, and through use of the ITBP as the common planning vehicle for industry (IC, DFAIT, provinces);
- consideration of innovative forms of export financing such as the creation of a federal and/or provincial Export Fund, with co-funding from EDC, banks, provincial retirement and mutual funds (A report will be made to the Minister for International Trade, and the Minister of Industry by September 1995) (DFAIT);
- continued industry consultations and export seminars to:
  - assist industry associations to undertake defined objectives to improve their members' export capabilities;
  - encourage the industry to continue harmonizing electrical standards, such as ISO 9000, especially with the U.S. and Europe;
  - continue to encourage and support exporters, particularly SMEs, to think globally and proactively in considering potential new markets and forging strategic alliances;

- encourage Canadian consultants to enter into alliances with Canadian manufacturers to build export consortia when practical (for BOT and large infrastructure projects);
- encourage Canadian manufacturers, consultants and constructors to enter international export consortia to tap into the huge world market through co-financing;
- encourage Canadian consultants to specify Canadian equipment wherever possible;
- continue to encourage electrical equipment exporters to use the wide range of services and assistance provided by Canada's worldwide network of embassies and consulates (IC, DFAIT/missions).

## Contact

Industry Canada  
Resource and Energy Technologies  
Manufacturing and Resource Technologies Branch  
235 Queen Street  
Ottawa K1A 0H5  
Tel.: (613) 954-3262  
Fax: (613) 941-2463



## Power Equipment

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Saudi Elenex '95: Info Booth, Mission	01-Apr-95	Riyadh	DFAIT	613-944-5984
Power & Energy Mission (Regional)	01-Mar-96	Johannesburg	DFAIT	613-944-6590
Energy Mission	01-Mar-96	Casablanca	DFAIT	613-944-0396
<b>Asia-Pacific South</b>				
PowerGen Asia '95: Info Booth	21-Aug-95	Singapore	DFAIT	613-996-5824
Powertrends 2000: Mission	14-Nov-95	Manila	DFAIT	613-995-7659
<b>Central/Eastern Europe and the Commonwealth of Independent States</b>				
Modern Electronics Fair: Info Booth	01-Oct-95	Ljubljana, Slovenia	DFAIT	613-992-1449
<b>East Asia</b>				
Hydro Power Mission to China	01-May-95	Yunan, Guizhou, Hunan, Guangxi	DFAIT	613-996-6987
Alternate Energy Mission	01-Aug-95	India	DFAIT	613-996-5903
Thermal Power Mission to Guangdong, Fujian, Hong Kong	01-Sep-95	China, Hong Kong	DFAIT	613-995-6962
Power Sector Study of Bangladesh	01-Sep-95	Dhaka	DFAIT	613-992-0952
Power Generation Equipment Mission	01-Feb-96	Malaysia, Thailand, Taiwan	IC	613-954-3251
EP CHINA '96: Info Booth	01-Oct-96	Beijing	DFAIT	613-996-6987
<b>Japan</b>				
Steel Industry Mission from Japan	01-Sep-95	Montréal, Ottawa, Edmonton, Vancouver	DFAIT	613-995-1282
<b>Latin America and the Caribbean</b>				
Power Mission from Chile	01-Jun-94	Montréal, Toronto, Edmonton, Vancouver	DFAIT	613-996-5549
Electrical & Energy Equipment: New Exporters Mission	01-Jan-95	Mexico	IC	514-496-5365
Power/Energy Mission from Venezuela, Chile	01-Jun-95	Ontario, Quebec	DFAIT	613-996-5548
Electric Power Mission from Latin America	01-Jun-95	Canada/Various	DFAIT	613-996-4199
IEEE Reunion de Verano de Potencia: National Stand	01-Jul-95	Mexico City	DFAIT	613-995-8742
Cogeneration Mission/Conference	01-Oct-95	Mexico	DFAIT	613-995-8742

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
<b>United States</b>				
Outgoing Mission	01-Nov-95	New York	DFAIT	613-944-5149
CFC Ban: Market Opportunities Seminar	01-Nov-95	Toronto, Montréal	DFAIT	613-944-7486
Power Gen '95 (Atlanta): National Stand	01-Dec-95	Atlanta	DFAIT	613-944-5149
Solo Show: American Society of Heating/Refrigeration/AC Engineers	01-Jan-96	Houston	New Brunswick	506-453-3984
International AC/Heating/Refrigeration Expo: National Stand	19-Jan-96	Atlanta	IC	613-954-3227







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# CANADA'S EXPORT STRATEGY

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*Aussi disponible en français sous le titre Machinerie industrielle primaire et secondaire.*



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Agricultural Technology, Machinery and Equipment.....	3
Ocean and Marine Shipboard Technology.....	7





## Mining, Forestry, Pulp and Paper

**T**his sector includes suppliers of equipment and associated technologies used by the natural resource industries of forestry, mining and pulp and paper.

### International Environment

The international arena for resource equipment is dominated by multinational companies based in Scandinavia, Germany and the United States. Growing environmental regulations, coupled with lower commodity prices, have been forcing resource companies to become more cost-conscious. These trends have created and continue to create a greater demand for better equipment and newer technologies that are cost-effective and environmentally acceptable. For example, to comply with environmental regulations many international mining and forestry companies operating in industrialized countries must purchase safer equipment for extracting and processing natural resources and recycling byproducts. Similar regulations are expected to take hold in developing countries over the next few years.

Internationally, mining companies are encouraging the development of equipment that incorporates advanced technologies. The objective of these companies is to attain fully automated mining operations, thereby reducing the labour required in mining operations and improving the safety of underground operations. The forestry companies are aggressively pursuing the upgrading of equipment through technologies designed to improve productivity. A similar emphasis on cost saving and environmental impact is being followed in the pulp and paper sector.

### Canadian Position

Canadian resource equipment manufacturers and technology suppliers can be divided into two categories, smaller, Canadian-owned firms producing specialized products for niche markets and larger multinational companies, often foreign-owned.

In general, Canada's resource equipment sector has concentrated on the development of cost-effective, environmentally acceptable processes and techniques and has begun to develop specialized and high-quality custom-engineered equipment.

The **mining equipment** sector produces a full range of exploration, mining and ore processing equipment and is supported by engineering and service companies. The majority of the firms in this sector are Canadian-owned, small- and medium-sized enterprises (SMEs). Exports represent a significant proportion of industry shipments and the Canadian domestic market continues to be dominated by imports.

The **forestry equipment** sector produces equipment for both harvesting and sawmill operations. The majority of the companies in this sector are small, producing specialized equipment for niche market applications. A high proportion of industry shipments are exported.

The **pulp and paper** equipment sector has been further weakened by continued rationalization. While some of the major companies in this sector have extensive process and machinery capabilities, international success has relied on system engineering and consortium approaches.

The demand for resource equipment continues to weaken domestically. It is, therefore, essential that the resource equipment firms intensify their search for export markets. The United States, Australia, New Zealand, Chile, Northern Europe and Asia represent important markets. Certain markets, such as the Commonwealth of Independent States (CIS) and some South American countries, present opportunities for system and/or turnkey solutions for each of these three industry sectors. In some cases, these types of opportunities may require innovative approaches



such as counter-trade measures, or industry collaborations such as strategic alliances or joint ventures to secure sales.

## Strategic Direction

- Target Western Europe, the CIS, North America and Australia for sophisticated equipment that uses advanced technologies to provide a degree of automated operation. These countries, which offer opportunities both as buyers and joint venture partners, prefer this equipment for quality and innovation for users who are trying to reduce the labour component of their operations and where environmental issues are predominant.
- Focus more attention, especially on total system solutions based on more conventional equipment, to develop market opportunities in resource-rich regions where natural resource development is a priority, such as South America, Central and South Africa, and Southeast and East Asia.
- Encourage the smaller, technology-rich companies in the resource equipment sector, especially those in the mining and forestry sectors, to develop and strengthen their relationships, through alliances, consortia and joint ventures, with original equipment manufacturers and their more traditional customers, the resource companies.
- Encourage associations such as the Machinery and Equipment Manufacturers' Association of Canada (MEMAC) to promote consortia and networking among member firms for those market opportunities requiring a turnkey or integrated systems approach. Continue to support the marketing initiatives of export associations, (e.g. Western Canadian Wood Machinery and Services Export Association [WCWMSEA] and the Canadian Association of Mining Equipment and Services for Export [CAMESE]). Industry associations can play a key role in the promotion of Canadian capabilities.

- Promote the formation of networks and encourage them to establish working relationships with agencies such as the Export Development Corporation (EDC), in order to develop the most competitive financing package while limiting the risk of individual companies. Encourage companies to consider offering creative financing packages, particularly for the newly developing countries with emerging economies.
- Organize major international trade shows and carefully orchestrate incoming and outgoing trade missions to present Canadian capabilities abroad. The Department of Foreign Affairs and International Trade (DFAIT), with support from Industry Canada (IC), will play a key role in these initiatives.

## Documentation

- *Mining Equipment Sourcing*, study by Hatch & Associates, March 1993;
- *Automation Technology Opportunities in the Mining Sector*, study by Hatch & Associates, December 1993;
- *Automation Technology Opportunities in the Forestry Sector*, study by H. A. Simons, March 1994.

# Agricultural Technology, Machinery and Equipment

**T**his sector includes manufacturers of livestock raising equipment and tractors, implements and machines that are designed for growing, storing, moving and primary processing of agricultural crops.

## International Environment

The market for farm machinery has become increasingly international as manufacturers strive to reduce costs with large-scale manufacturing to serve worldwide requirements. For example, tractor production is largely located in three different regions: Japan, the European Union (EU) and North America. Each region specializes in a particular size of tractor, and sells them throughout the world. Tractors with less than 40 horsepower are made in Japan, and those with 40 horsepower to 100 horsepower are predominantly manufactured in the EU. Tractors in excess of 100 horsepower are made in North America.

The bulk of the manufacturing is done in the United States, the United Kingdom, Germany, France, Japan and Canada. The world market, which was about \$32 billion in 1992, is divided into approximately three equal parts, EU, North America and the rest of the world.

The following trends are altering the nature of the global market for farm machinery:

- increasing production of cereal grains by traditional importers. This shift, in countries such as Saudi Arabia and the People's Republic of China (PRC), has not only resulted in these countries becoming net exporters of cereal grains, rather than importers, but also as good markets for farm machinery;
- the privatization of farming in Eastern Europe and the republics of the former Soviet Union (FSU). The new order of independent countries that are no longer required to source their equipment within the socialist bloc has opened a major new market for farm machinery producers in the Western world. However, finding appropriate financing and repayment mechanisms remains a significant challenge;
- the decreasing number of farmers and the increasing size of farms in North America;
- the emergence of regional trading blocs, particularly the North American Free Trade Agreement (NAFTA) and EU countries, coupled with the liberalization of farm machinery trade resulting from the General Agreement on Tariffs and Trade (GATT), require a rejuvenated marketing approach to maximize opportunities resulting from standardized regulations and tariff reductions.

## Canadian Position

The Canadian agricultural machinery industry encompasses a wide range of farm machinery, including two-wheel and four-wheel drive tractors, combine harvesters, seeding and tillage equipment, hay handling and harvesting equipment and grain handling and storage equipment. Over the years, the Canadian industry has successfully developed specialized machinery for the production of cereal grains on large farms under dry land farming conditions. In addition, certain "shortline" firms produce specialized equipment for particular crops (e.g. tobacco, potatoes and sugar beets).

According to Statistics Canada data, total industry employment in 1992 was 7881 people, working in 213 establishments. Total factory shipments in current dollars were \$856.8 million in 1992. Exports amounted to 57 percent of total shipments, with the United States receiving 90 percent. (Industry Canada sector estimates, based on provincial and association surveys/listings of agricultural equipment manufacturers, would suggest that 500 to 600 establishments make farm machinery in Canada and their production could be double the Statistics Canada data.)

The trend to internationalism offers an opportunity to Western Canadian manufacturers of farm machinery, since Canadian dry land farming technology is at the leading edge and is in demand in all the major countries growing cereal grains under large-scale dry land farming conditions. Canada will continue to be the world's leading source for large-scale dry land farm machinery and technology in the next decade.

Canada, with current dollar exports of approximately \$0.5 billion, accounts for 4 percent of world trade in farm machinery. The United States will continue to be Canada's largest market, but substantial opportunities for growth exist in Australia, Mexico, the EU, the PRC, Russia, Ukraine and Kazakhstan.

The principal strength of the industry is not only in the economies of scale that have resulted from favourable access to the U.S. market, but also the low-cost production and innovative products resulting from abundant low-cost, high-quality sources of manufacturing inputs (i.e. electricity, skilled workers, transportation and communications infrastructure, and steel). The free trade environment that has existed for 50 years has ensured that Canadian industry has access to a market large enough to exploit economies of scale.

## Strategic Direction

The overall goal of the international strategy is to increase the number of Canadian exporting companies by 30 percent and exports of farm machinery by 50 percent in five years. To achieve this goal, elements of the strategy must include market studies and targeted trade fairs and missions that will:

- continue to actively pursue the United States as Canada's main market, particularly for companies new to international trade;
- take advantage of the market opportunities for farm machinery in Mexico created by the NAFTA through joint venture marketing and manufacturing initiatives;
- target the CIS (especially Ukraine, Kazakhstan and Russia), and Central and Eastern Europe as prime development markets for Canadian dry land farming technology;
- develop investment and strategic alliances for technology exchange and diffusion to exploit the opportunities presented by the changing market regime of the EU. Particular opportunities to be pursued will result from the creation of a unified Germany, and the tariff reductions agreed to at the GATT negotiations in Brussels. Specific activities will focus on productivity improvement co-operation, technology exchanges, and increased marketing of equipment, particularly in the eastern part of Germany;
- strengthen co-ordinated marketing approach with industry associations and provincial agencies to expand marketing and technological exchanges to revitalize export market development for Canadian shortline farm machinery manufacturers;
- continue to use key Canadian agricultural equipment trade shows to promote Canadian agricultural mechanization technology;
- focus market development support in the PRC on large-scale grain harvesting, storage and processing equipment in Heilongjiang province;
- maintain a market development program for Canadian dry land farming technology in Australia;
- assist associations and companies to overcome financing and marketing problems in new markets, particularly in developing countries;
- continue market development for specialized cereal grain equipment in South America, Saudi Arabia, Iran, Jordan and the Maghreb countries of North Africa;
- encourage special crop equipment manufacturers (such as potato equipment manufacturers in New Brunswick and Prince Edward Island, tobacco equipment manufacturers in Ontario, and orchard equipment manufacturers in British Columbia and Ontario) to increase

marketing initiatives (i.e. individual visits, trade fairs and missions) to targeted regions and countries with sales growth potential;

- encourage industry associations (particularly CFIEI, PIMA, AFMAQ and OFEMA) to serve as channels for market information by making them a central source of data through direct participation in its development;
- assist companies and their associations to develop focussed strategies that reflect company and sector strengths and market opportunities by increasing their involvement directly in the trade development process.





# Ocean and Marine Shipboard Technology

**T**he ocean and marine shipboard technology sector includes suppliers of low-volume/high-value custom-engineered products and services for use in, on and beneath the oceans.

## International Environment

The major competition comes from the United States, France, Germany, Norway and the United Kingdom.

The traditional markets for these supplier firms have been offshore oil and gas, marine science, marine defence and shipbuilding. Each of these markets has experienced declines over the past few years due to various economic factors such as depressed oil prices, global recession and East-West detente.

New markets are emerging, however. Internationally, there is a growing environmental awareness that is fostering regulatory regimes which impact on coastal zones. These regimes, in turn, are creating new market opportunities for companies in this sector. In the EU, for example, regulatory directives and the implementation of the polluter-pay principle, have created impositions on EU member states that should result in substantial new business opportunities.

New markets are also emerging from the obligations imposed on countries that have laid claim to their offshore regions as Exclusive Economic Zones (EEZs). Countries claiming these zones are obligated to manage them in accordance with UN requirements. The diverse needs to manage EEZs should provide both niche and turnkey business opportunities. A large number of EEZs are in the Pacific Ocean, associated with island states in such areas as Micronesia, Melanesia, parts of Asia and Australia.

International financial institutions (IFIs) such as the World Bank and the Asia Development Bank, are likely to be important players in markets emerging from environmental concerns and the obligations of ownership of EEZs.

Diverse opportunities exist in the CIS and other Eastern European countries. The use of barter and other forms of counter-trade in these markets is common, and innovative approaches are often needed to secure sales.

## Canadian Position

Canadian firms in the ocean and marine equipment and technology fields are generally small, Canadian-owned, with entrepreneurial and advanced technical capabilities.

- Approximately 500 firms are active in the sector and annual sales are about \$1 billion. There is representation across the country with clusters of specific activity in British Columbia and Atlantic Canada.
- Areas of recognized capabilities include hydrographic and oceanographic instrumentation, subsea robotics and remotely operated vehicles, remote-sensing systems, navigation and communication systems and "smart ship" technology.
- The traditional domestic markets for firms in this sector, such as offshore oil and gas, marine science, marine defence and shipbuilding, have declined appreciably over the last few years. However, many of the companies are suppliers to niche markets and have been highly successful internationally.
- The markets emerging from environmental concerns in the coastal zones and ownership obligations attached to EEZs, may support a "Team Canada" or turnkey approach as well as present niche opportunities to the industry in Canada. Companies should not be averse to collaborating with other Canadian and/or foreign firms to exploit these markets.

- IFI expenditures are expected to play an important role in these emerging markets. Despite Canada's role as a leading donor to IFIs, Canadian companies have not taken full advantage of associated procurement opportunities. Total lending from these institutions exceeds US\$40 billion a year, a significant portion of which could be of interest to Canadian suppliers. IFI procurement activity can represent a major source of financing for penetration into developing markets and regions that can otherwise be difficult markets.

## Strategic Direction

Industry networks are expected to be established on the east and west coasts through support mechanisms such as the Canadian Business Networks Coalition, a Canadian Chamber of Commerce-led initiative. These networks, along with industry associations and government agencies such as Industry Canada (IC), the Department of Fisheries and Oceans (DFO) and DFAIT, will be used to disseminate strategic market and industry intelligence to:

- encourage companies to seek new markets such as those emerging opportunities arising from environmental regulatory requirements (IC, DFO);
- promote alliances and other collaborative measures that will be needed to meet new business opportunities, such as turnkey contracts, arising from the creation of EEZs (IC, DFO, Natural Resources Canada [NRCan]);
- encourage the use of counter-trade initiatives for exploiting the CIS and Eastern Europe markets, especially those initiatives that incorporate innovative marketing and collaborative approaches (IC);
- improve mechanisms for supplier identification and development and for the timely dissemination of information and intelligence to potential bidders on projects arising from such financial

institutions as the World Bank, Asia Development Bank, Africa Development Bank and the European Bank for Reconstruction and Development (DFAIT, IC);

- promote participation in major international trade shows and conferences, along with carefully organized incoming and outgoing trade missions (DFAIT, IC).

## Contacts

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Department of Foreign Affairs  
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Sectoral Liaison Secretariat  
125 Sussex Drive  
Ottawa K1A 0G2  
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Fax: (613) 944-0050

## Primary/Secondary Industrial Machinery

Activity	Date	Location	Dept.	Contact
<b>Africa and the Middle East</b>				
Mining Study: Southern Africa Potential	01-Apr-95	Lusaka	DFAIT	613-944-6586
Mining Mission from South Africa	01-Sep-95	Canada/Various	DFAIT	613-944-6590
Packprocess/Printexpo '95: Info Booth	01-Oct-95	Johannesburg	DFAIT	613-944-6590
Mining Mission from Canada	01-Jan-96	South Africa/ Various	DFAIT	613-944-6586
<b>Asia-Pacific South</b>				
Forestry Technical Mission from Eastern Canada	01-Sep-95	Auckland, Rotorua	DFAIT	613-995-7652
AIMEX (Mining Equipment): National Stand/Mission	16-Oct-95	Sydney	DFAIT	613-995-7352
China Paper '95: Info Booth	07-Nov-95	Beijing	IC	613-954-7812
<b>East Asia</b>				
HOFEX '95: Info Booth	02-May-95	Hong Kong	DFAIT	613-995-6961
<b>Latin America and the Caribbean</b>				
Marine Environmental Mission	TBD	Mexico City	IC	709-772-6602
<b>Multiple Markets</b>				
Woodtech Trade Fair	21-Sep-95	Vancouver	B.C.	604-844-1921
Incoming Buyers to Paleoceanology Conference	10-Oct-95	Halifax	IC	902-426-9475
<b>United States</b>				
IEEE Oceans '95: Info Booth	09-Oct-95	San Diego	IC	902-426-9475
Navigating Beyond: Marine Technology Partnering	10-Apr-95	Newport	IC	902-426-9475
<b>Western Europe and European Union</b>				
Mission/Technology Exchange: Agricultural Machinery	01-Nov-95	Hannover, Dusseldorf	IC	613-954-3226
Oceanology International '96: Info Booth	01-Mar-96	Brighton	IC	613-954-3398

Note: Dates and locations are subject to change.



## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DEAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries
15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**



All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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*Aussi disponible en français sous le titre Matériel de transport urbain et ferroviaire.*



## Rail and Bus Equipment

**T**his sector comprises urban transit systems (both guided rail and buses) and passenger and freight railway equipment.

### International Environment

The market outlook for guided urban transit systems and intercity passenger rail equipment is very promising. Significant opportunities for Canadian mass transit suppliers exist, particularly in the United States, Mexico and Southeast Asia.

Cities in North America and overseas that were early converts to mass transit will need to renew their systems and rolling stock. Over the next decade, developing countries, which have some of the world's fastest-growing cities, will require solutions to urban transit problems.

By the year 2000, it is estimated that passenger rail projects valued at \$37 billion will be undertaken, while the 20-year North American market for high-speed rail equipment has been estimated at \$20 billion.

The North American bus sector has potential for moderate growth of 5 percent to 7 percent in volume annually. Federal, state and provincial regulations are a determining factor in assuring growth in this sector, as transit authorities are required to replace older transit buses to comply with new legislation requirements such as emission control and low-floor bus design to ensure accessibility.

As for the freight rail sector, the last year has seen a dramatic increase in the demand for rail cars and locomotives in North America. Orders for cars in 1994 were 50 000, double the 1992 level. This upsurge in demand is expected to continue for the next few years. Two factors have contributed to this market upturn: first, North American railroads have entered into a replacement cycle for their existing fleets, and second, significant technological innovations have occurred, primarily in intermodal systems.

Canadian freight rail manufacturers are well positioned to take advantage of this growing North American market. Increased intermodal transportation linkages are also expected to provide renewed opportunities in the freight rail sector, especially since the implementation of the North American Free Trade Agreement (NAFTA) on January 1, 1994.

In Europe, some niche opportunities are foreseen. The advent of a single market increases the scope for cross-border strategic alliances and investments between suppliers. Potential in Eastern Europe, however, is limited by lack of financing, competition from European multinationals and the low costs of Eastern European manufacturers.

In Latin America, privatization offers new opportunities for the supply of equipment and consulting services. Rail standards are the same as those in Canada, and it is a relatively close and inexpensive market to service. In the short term, however, financial constraints may dictate that Latin American countries focus on upgrading and refurbishing existing plants and equipment. In Mexico, the focus will be on government procurement to upgrade the transportation infrastructure.

In Africa and the Middle East, including Israel, there are opportunities for consultants and suppliers of locomotives and rail maintenance equipment. In Saudi Arabia, there will be opportunities in consulting services for a national railway plan. Many of the opportunities in Africa are with major railroad rehabilitation projects financed by the African Development Bank or the World Bank.

There are a few opportunities in the Asian market for Canadian urban transit products and services, and there is some scope for railway

systems and engineering. The World Bank continues to lend China large infrastructure loans for energy development and transportation. Private and government-promoted trade consortia are forging new business liaisons to promote Canada-China trade. A number of Chinese rail transportation projects are under scrutiny by Canadian firms. Canadian consulting firms are following closely railway rehabilitation projects involving track, bridges and signalling systems in countries such as Viet Nam, Cambodia and Laos.

For Asia in general, distance is a factor and negotiations are long, which substantially increases the cost of doing business. Culture and language are frequently perceived as barriers, and political instability has affected major projects.

In Australia, the building of standard-gauge systems and the demand for locomotives, rolling stock and control systems provide opportunities for Canadian exports.

## Canadian Position

Virtually all Canadian urban transit and rail systems and vehicles are supplied by domestic sources. Over 70 percent of production is exported, mainly to the United States. About 10 000 people are employed in the manufacture of transit vehicles and related parts and supplies. This excludes aftermarket components and products, which cannot always be identified by sector, and consulting services, which are also substantial contributors to sales and employment.

Some of the major products and services provided by the Canadian rail and bus equipment industry are:

- rail rolling stock: passenger and freight;
- buses: large transit conventional, low-floor and alternate-fuelled, intercity coaches, and para-transit and school buses;
- diesel locomotives: DC/AC traction;
- advanced train-control systems;
- locomotive events recorders and simulators;

- radios;
- end-of-train units;
- head-hardened rail and other rail products;
- automatic vehicle location and health-monitoring systems;
- fare-collection technology;
- wheelchair lift and restraint systems for transporting disabled persons;
- linear induction motors;
- systems and software for scheduling and maintenance of bus fleets;
- supervisory control and data acquisition for metro systems;
- use of alternate fuels; and
- consulting services such as the development and implementation of management information systems (MIS) intermodal operations; supervision of rail construction; and locomotive rehabilitation programs.

In addition, some companies have developed specialized manufacturing processes for servicing the rail industry (e.g. transfer lines for stripping, cleaning, inspecting and rebuilding locomotive engines and robot-driven equipment for painting the inside surfaces of tank cars).

Canadian companies with proven technologies and expertise, new products, operational efficiency and proximity to the United States, should be well positioned to continue to expand market share in the United States. "Buy America" requirements with respect to urban transit equipment, however, restrict market access and discourage investment or expansion in Canada. The final assembly requirement has forced Canadian assemblers of buses and rail vehicles to set up facilities in the United States. The 60-percent U.S. content requirement compels Canadian component suppliers to establish an additional plant or relocate to the United States. Pressures to increase the content level will need to be countered. Canadian opportunities to participate in U.S. high-speed rail will also be restricted by local content requirements.



Freight rail equipment opportunities in the U.S. market are improving with the implementation of Canada-U.S. Free Trade Agreement (FTA) tariff cuts, which are to be completed by January 1, 1998. Canadian firms are expected to continue to play a major role in both the new and locomotive rebuild markets, largely in the United States, but with some offshore sales as well. Freight car manufacturers have made major inroads in the U.S. market in the last year. This trend is expected to continue as railways renew aging equipment and acquire specialized cars, such as those for intermodal use.

## Strategic Direction

While some developing countries offer opportunities for Canadian rail and bus equipment companies, the United States remains the primary export market for Canadian firms. Consequently, government initiatives are focussed on the promotion of Canadian capabilities and accessibility to the U.S. market.

The Government will continue its work on government procurement and the elimination of non-tariff barriers affecting access to the U.S. market for Canadian products and services.

The Government will continue to provide support to the Canadian Urban Transit Association (CUTA) and its efforts to counteract the U.S. "Buy America" legislation and other non-tariff measures.

A federal interdepartmental task force has examined the issues of how to maximize Canada's commercial opportunities related to international financial institution (IFI) lending. The Department of Foreign Affairs and International Trade (DFAIT) and Industry Canada (IC) will improve mechanisms for supplier identification and development, and for the timely dissemination of project information and intelligence to potential bidders.

Under Phases I and II of the International Opportunities Canada (IOC) Program, DFAIT will maintain an up-to-date directory of Canadian exporters of rail and bus equipment and services, and will undertake a review of international market opportunities for exporters in this sector.

Timely information will be provided to Canadian exporters with respect to upcoming international trade shows, fairs and exhibitions (DFAIT/missions, IC).

With reference to the NAFTA, the Government will:

- carry out and disseminate the results of a survey to determine opportunities in Mexico for Canadian transportation products and services, and the type of commercial arrangements most likely to be successful in exploiting these opportunities (DFAIT, IC);
- focus on access to government procurement in Mexico, given Mexico's requirement to upgrade its transportation infrastructure (DFAIT).

## Contact

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Fax: (613) 952-8088

## Rail and Bus Equipment

Activity	Date	Location	Dept.	Contact
<b>Asia-Pacific South</b>				
Railway Engineering and Operations Briefing	Sep-95	Sydney	DFAIT	613-996-1052
<b>Canada</b>				
Seminars in Canada to Distribute Urban Transit and Rail Study on Mexico	Apr-95	Toronto, Winnipeg, Montréal	DFAIT	613-954-3729
<b>East Asia</b>				
Transport Viet Nam - National Stand	Nov-95	Hanoi	DFAIT	613-995-8649
<b>Europe</b>				
Urban Transit - Market Opportunities - Seminar	TBD	Copenhagen	DFAIT	613-995-4730
<b>Latin America and the Caribbean</b>				
Rail and Transit Mission/Presentation	Jul-95	Buenos Aires	DFAIT	613-996-5549
<b>Mexico</b>				
Bus and Rail Mission	Feb-96	Mexico	DFAIT	613-995-0460
<b>United States</b>				
Transportation Newsletter	Apr-95	Chicago	DFAIT	613-944-5149
Transit Mission from Los Angeles	Jun-95	Vancouver	DFAIT	613-944-5149
Transit Mission from Detroit	Jun-95	Toronto, Montréal	DFAIT	613-944-5149
Northeast Public Project Opportunities Briefing	Oct-95	Boston	DFAIT	613-944-5149

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ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
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BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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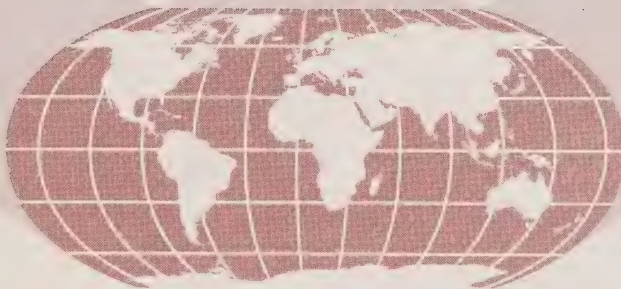
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EXPORT STRATEGY**

***The International Trade  
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**1995/96**

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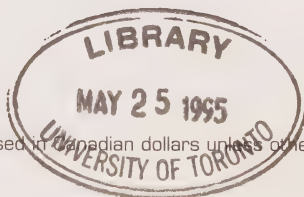
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|---|---|

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*Aussi disponible en français sous le titre Industrie spatiale.*



## Space

The space industry consists of companies and organizations that provide products, including hardware and software, that generally form part of larger space systems, such as satellites, space vehicles, ground stations for communicating information and/or controlling space assets, and launch vehicles, including expendable and reusable rockets and space planes. It also includes a range of service providers (such as geomatics and telecommunications firms) whose business activities depend on the use of space systems.

### International Environment

In 1993, the world space industry activity was estimated at US\$43 billion, dropping significantly (from US\$55 billion in 1992) since the collapse of the Soviet Union. It is still highly concentrated in the United States (75 percent), Europe (14 percent) and Japan (5 percent).

Government defence and civil programs account for close to 90 percent of the global market. While the defence portion is difficult to estimate, it has decreased in recent years and is now considerably less than civil spending. Since the collapse of the Soviet Union, military spending on space has dropped dramatically; by some 30 percent in the United States and by over 90 percent in the former Soviet Union (FSU). For national security reasons, most governments try to procure space equipment from domestic firms, and use their space programs as vehicles for national industrial and scientific development.

Surveillance, command, control and communications via satellite have continued to rise in importance since the early 1980s, especially since the Gulf War. On the other hand, with the end of the Cold War, military spending in general has declined in many markets. As a result of rationalization, many marginally profitable firms are being taken over by larger, more diversified firms and several major mergers are anticipated (e.g. Lockheed/Martin Marietta). Defence space firms are looking to the civilian space arena and to strategic alliances to reduce research and development (R&D) costs and improve market access. While the FSU was not an active participant in

the international space market, Russia has the interest and potential to become a major player.

The high cost of R&D has also contributed to the internationalization of major space programs, characterized by the establishment of new and stronger links between space companies in different markets or trading blocs. For example, the European Space Agency (ESA) is a key vehicle for co-operation in space projects for its 14 European members, and Canada, which has a unique relationship to the ESA as a closely co-operating state.

The U.S.-led International Space Station (ISS) is currently a co-operative effort among the ESA, Japan and Canada, and negotiations are under way to bring Russia into the partnership.

The use of space for commercial purposes is growing and evolving. Space-based communications comprise the most commercial space activity, relying on government support primarily for R&D and advanced technology development. Although there is a commercial market for remotely sensed data and the reception and processing equipment needed to acquire it, remote sensing does not yet generate sufficient returns to cover the cost of remote-sensing satellites, which are usually procured by governments.

### Communications

Satellite communications are driven by the rapidly growing \$600-billion annual demand for communications services, which include telephony, data transmission, cable and broadcast services. In 1992, commercial satellite systems operators and transponder brokers earned approximately

\$4.4 billion from sales of satellite-based communications services, 34 percent of which was in the United States.

The world civilian market for all types of satellite communications (satcom) space-based equipment is forecast at over \$1.5 billion annually, declining slightly in the late 1990s, for an estimated total market (1994-2004) of approximately \$16 billion. Excluding Russia, for which accurate numbers are not available, more than 80 geostationary communications satellites (comsats) are expected to be launched between June 1994 and the year 2000, representing a total market of approximately \$8 billion. Roughly one third of this market remains to be captured under firm contracts. The U.S. market is expected to shrink to less than 20 percent of this, primarily in favour of Asia-Pacific markets. The Asia-Pacific region should dominate the rest of the world market outside of the U.S. and Europe, and is expected to represent 30 percent of the world demand between now and 2004.

The world annual civilian market for satcom ground-segment equipment, currently estimated at \$3.35 billion, is expected to grow to over \$5 billion by 1996 at an annual compound rate of 7 percent. This represents a total estimated world market of over \$70 billion (1992-2004), or close to five times the space-based communications (satellite) equipment markets. The demand for TV receive only (TVRO) equipment represents the largest portion of the ground-segment market, with an additional 3 million to 5 million installations (over \$4 billion) expected to be purchased in the next two years.

The military satellite communications (milsatcom) space and ground-segment market is approximately equal in size, but is heavily protected and dominated by the United States, with \$1.3 billion budgeted for 1994. France's Syracuse on Telecom and the British Skynet 4 are the only other known milsatcom systems scheduled to be launched before the turn of the

century. In addition, several Western countries are pursuing the development of other milsatcom systems for later launches, under co-operative international arrangements such as EUMILSAT, INMILSAT, and BIMILSAT.

Positive trends include rising demand for:

- space-based, mobile, personal communications and direct broadcast or direct-to-home satellite communications, including TVROs;
- Very Small Aperture Terminal (VSAT) networks in North America and in countries where the terrestrial telephony infrastructure does not exist;
- global coverage multisatellite networks such as Hughes' Spaceway.

Both the civilian and military markets for space segment equipment are dominated by the United States. As in the past decade, two thirds of the world's geostationary satellite systems (excluding those of the FSU) are expected to be supplied by three U.S. companies: Hughes, Lockheed/Martin and Space Systems Loral. Canada supplies less than 2 percent of the world market for civilian geostationary satellite systems.

## Remote Sensing

Greater concern for the environment, and the need to obtain information over large areas in a cost-effective way, will strengthen the already rapid growth of geographic information. Geographic information systems (GIS), which combine a variety of data with maps and imagery, provide the bulk of such information products. The GIS market is estimated to be \$13 billion per year between 1996-2000. Satellite-based remote sensing is increasingly able to service this market; in particular, the world market for value-added goods and services, based on satellite remote sensing, is estimated to be about \$9 billion over the 1995-2000 period. Strong demand for geographic information systems and their products is in turn driving the demand for the platforms from which raw data are acquired.

Canada dominates the world market for a particular part of this market: satellite remote-sensing reception and processing systems.

The space segment of remote sensing consists of meteorological satellites, which had a fairly constant market of about \$600 million per year between 1986 and 1992, and earth observation satellites, which had a market growth of \$325 million to \$800 million per year in the same period. Although space budgets are under pressure around the world, the importance of satellite data for understanding environmental problems continues to shield this portion of national budgets from significant cuts.

Even if the recent rapid growth of remote-sensing satellite systems slows, the stage has been set for considerable future activity in the ground segment and in the user community (hardware, software, processed data, education, consulting). The market will be strongest in equipment to receive data and in activities that add value to the data, such as services and equipment that convert data to usable information.

### **Space Infrastructure and Robotics**

The International Space Station (ISS), led by the United States and involving Canada, Japan and the ESA, is an important infrastructural element for space science. It is closely controlled by participating governments through their space agencies, for reasons of national prestige. There are two levels of "competition" for space station work: direct contracts to national agencies, and contracts to prime contractors or their subcontractors. It is extremely difficult for Canadian companies to become direct contractors to foreign national agencies in the absence of a directly associated Canadian government agreement. Canada's share in the multibillion-dollar ISS program is about 2.5 percent, primarily for the construction of the Mobile Servicing System (MSS). Russia has been invited to become a partner in the ISS, and negotiations are under way; an agreement is expected to be signed early in 1995.

By virtue of an intergovernmental agreement, the primary ISS market for each partner is essentially its own contribution to the project. There are a number of other identifiable markets, including maintenance and further enhancements of the existing MSS, spinoff opportunities into other space robotics markets, and diffusion of technology into other markets, especially the terrestrial market.

Terrestrial market opportunities are substantial. Nuclear waste handling has been specifically identified as a near-term, \$20-billion market, with more to follow. Other terrestrial markets are also developing, especially in the resource-harvesting area, where hazardous or difficult conditions attract the use of robotics. While identification of these markets is softer, they are likely to develop over the next decade and should be worth hundreds of millions of dollars per year.

Space market opportunities will also be great, and will be developed as we prepare to explore and exploit the solar system further. However, these markets will only become apparent well past the turn of the century.

### **Space Science**

A measure of market size for space science is the amount that governments are prepared to spend in support of such activities. Space science is driven by scientists' continuing need for broad-based knowledge, often unfettered by near-term economic considerations. Industrial development and commercial interests also need knowledge derived from space science. However, revenue-generating commercial activities resulting from space science programs take longer to develop, and are more difficult to predict and compute than those generated by the other major space segments. Annual spending on space science by the United States, the ESA and Japan runs at approximately \$3 billion, with Canada spending about \$25 million per year. Programs are invariably sponsored by governments, and market opportunities exist for the provision of specialized equipment.



## Canadian Position

In 1993, Canada's space industry employed an estimated 4000 people and generated sales of over \$650 million. Seven companies had space-related annual revenues in excess of \$15 million, and accounted for over 85 percent of total industry sales. Spar Aerospace represents over half of total industry sales and employment. The majority of companies in the space industry are Canadian-owned.

The Canadian space industry is comparable to that of most other industrialized countries in terms of per capita sales and employment. However, it exports a larger proportion of its total production than any other major space-faring country. Exports have grown from about \$10 million in 1977 (17 percent of sales) to an estimated \$270 million in 1993 (40 percent of sales).

Canadian companies focus on technology and market niches, with specialized areas of expertise. Examples include:

- COM DEV's multiplexers/switches;
- SED/Calian's telemetry, tracking and control equipment;
- MPR Teltech's ground station network technology;
- MPB Technologies' expertise and unique capabilities in space photonics;
- Canadian Marconi Company's and CAL Corporation's mobile satellite terminals;
- MacDonald, Dettwiler and Associates' (MDA) earth-receiving facilities;
- Intera's aerial radar mapping;
- Telesat's engineering, spacecraft procurement management and launch operations expertise;
- CAE's space simulation capabilities.

As a result of their niche strategies, many Canadian companies dominate the world market for the products or services they provide.

Spar Aerospace, as the prime contractor for the Canadian space program, has developed systems integration skills and payload capability. As well,

Spar produces and exports satellite subsystems such as antennas and electronic systems. It is also pursuing new opportunities in small satellites and remote-sensing instruments.

Over 150 Canadian companies currently sell some space-related products and/or services. More of these companies, particularly in the remote-sensing, value-added area, are expected to enter the international market.

In communications, the challenge for the industry is how to exploit the space and ground segments of fixed satellite-based, overseas telephony markets, and how to market both hardware (space and ground) and service segments of the new global mobile networks. Canada's lead role in developing the Mobile Communications Satellite (MSAT) has positioned industry to pursue the rapidly growing market in mobile satellite communications products and services.

Market opportunities in the remote-sensing area are related to ground equipment, software and value-added services for both radar and optical data. Canadian firms are already established world leaders in ground-station and processing-system design. In fact, MDA has provided systems for 80 percent of the installed base of remote-sensing reception facilities worldwide. In the area of value-added products and services, Canadian companies also play a leading role, currently supplying about 10 percent of the world market, with sales of approximately \$85 million in 1993. Sales are expected to increase to \$240 million by 1998.

Although all remote-sensing data is currently provided by satellites belonging to other countries, Canada will operate its own remote-sensing satellite in 1995, when RADARSAT is launched. RADARSAT data will be internationally marketed exclusively by RADARSAT International of Richmond, B.C., which is negotiating reception agreements with ground-station operators, usually government-funded national facilities. This will be complemented by a concerted effort to promote global awareness and sales of RADARSAT data and related Canadian goods and services. Canada is



already a world leader in the reception, analysis and interpretation of radar data, and RADARSAT will be the world's first operational satellite providing radar remote-sensing data.

Canadian expertise in natural-resource management, environmental monitoring, mapping and remote sensing can be a valuable tool to increase sales of related products and services. The world market for value-added goods and services associated with satellite remote sensing is estimated to be about \$1.8 billion annually, and is growing at 10 percent to 15 percent per year. Canadian value-added companies that can demonstrate their superiority in using radar data and integrating it with other sources of remote-sensing data will be poised to capture an increasing share of the market for geographically based information, which is used worldwide for natural-resource and environmental management.

Export opportunities for Canadian companies on the ISS are limited to subcontracts to foreign companies. In space robotics, which is closely associated with Canadian involvement in the ISS, Canada has developed some unique capabilities. Markets are emerging for the handling of contaminated waste, which requires specialized hardware and software systems. While space robotics hardware is not appropriate for terrestrial applications, the merging of space software with existing terrestrial hardware could place Canada in an advantageous position. The United States represents a near-term market (some \$20 billion over 20 years), but similar requirements will eventually emerge in Eastern Europe. Although many opportunities will likely emerge in space for space robotics, such as satellite servicing, market size is unquantifiable and at least 10 years away.

National preferences dominate space science activities. Canadian government participation in foreign programs is usually required to obtain work for Canadian companies. Bristol Aerospace is an exception, exporting 95 percent of its sounding rockets for space science experiments, mainly to the United States.

The small size of the domestic market tends to place the Canadian space industry at a disadvantage in marketing high-volume products where cost is the critical factor. Nonetheless, some Canadian space firms are world competitors. The biggest obstacle to Canada's continuing success in space-hardware manufacturing is a shortage of capital to undertake large, multibillion-dollar activities, such as the new global mobile satcom projects, coupled with the corresponding large size of the participating companies.

Canadian firms have options in marketing in this competitive environment. Increasingly, space companies worldwide are using strategic alliances, teaming arrangements and joint ventures to gain access to markets, technologies and the financial resources required to undertake large projects. Canadian companies should consider wider use of such arrangements to compete in a world space market dominated by a few giants.

Canada's strengths lie in system and component design and integration; knowledge-intensive as opposed to mass-produced hardware; and complete information and/or communications solutions.

Critical factors for continued export success include:

- the formation of international alliances/partnerships (often requiring government-to-government agreements);
- innovative, government-supported export financing;
- stable, continuing government investment in the development of emerging new technologies.

## Strategic Direction

Industry-government consultations have determined that key marketing priorities will include:

- satellite communications, particularly prepositioning for the developing mobile

market, while exploiting fixed satellite-based, overseas telephony markets;

- remote sensing, specifically co-ordinating Canadian efforts to sell RADARSAT data, image-processing systems and software, and value-added products and services;
- ground-segment equipment, in both communications and remote sensing;
- small satellites, assessment of the market for small satellites, suggested as a possible major growth area in the coming decade;
- space robotics as an enabling technology for widespread application to environmental clean-up and hazardous-waste handling, defence, medicine and education.

The Interdepartmental Working Group on International Trade in Space Products was created in 1993 to provide greater co-ordination of export-marketing activities among federal government departments, with provincial governments, and between government and industry. All interested federal departments and agencies and Canadian space companies are encouraged to participate in the Working Group. Provincial interests are represented by the Atlantic Canada Opportunities Agency (ACOA), the Federal Office of Regional Development-Quebec (FORDQ), the Western Diversification Office (WDO), and the Ontario government.

Based on their estimates of market growth, Canadian prospects, access considerations and market size, a group of the largest Canadian space companies suggested a market emphasis as follows: The industry group felt that the United States, Europe and Japan, as the largest, most diverse, and most technologically advanced markets, continue to be of primary importance. Additional effort beyond historical levels, is however unnecessary at this juncture. Three new growth areas were identified as requiring extra marketing effort and government attention: China, Russia/Eastern Europe, and the Pacific Rim countries (the Republic of Korea, Thailand, Singapore, Taiwan, Indonesia, Malaysia, Viet Nam

and Hong Kong). Other regions of lesser, though important, market interest are Mexico and Latin America, and the Middle East. Regardless, expanded involvement with national space authorities in all countries remains a priority.

A better comprehension of the United States as both the dominant supplier and market for space products and services is an important component in the normal development of a space-market strategy for Canada. Development of such a market strategy is a priority for the Canadian space community, in particular the Working Group, for the next year. As a first step in the development of this strategy, the Department of Foreign Affairs and International Trade (DFAIT) is funding a study of the U.S. space market.

Government activities dominate space markets worldwide. This suggests a strong role for the Canadian government in assisting industry with market development and trade promotion, in particular with foreign governments. Broad-based trade promotion activities abroad can be carried out under a "Team Canada" umbrella, with the Canadian Space Agency (CSA) as team captain, supported by other departments such as DFAIT and Industry Canada (IC).

To maximize the impact of limited public and private resources, Canadian involvement in trade fairs and missions in the space sector will be focussed and organized with careful selection of a small number of high-profile promotion activities directed at specific markets with specific objectives. Small- and medium-sized enterprises (SMEs) will be consulted and encouraged to become involved. The Canadian Space Industry Capabilities Guide will be updated as an information source and a promotional tool.

In addition to these broad-based promotion initiatives, the Government, in particular the CSA, IC and DFAIT, along with the DFAIT network of trade missions abroad, can provide a valuable service to individual firms in their pursuit of specific overseas contracts. The CSA, for example, through its co-operation with other

space agencies, has access to valuable market intelligence as well as key decision makers in the international government space community.

The Working Group will ensure that detailed information is provided to the Canadian space community regarding the services provided by the Government, such as international contracting assistance through the Canadian Commercial Corporation (CCC) and export financing through the Export Development Corporation (EDC).

A key priority of the Working Group for the coming year will be the identification, collection and dissemination of intelligence about priority markets. This includes broad-based but specific activities such as:

- production of information on national space and technology development programs;
- publication of a list of key decision-making contacts in national space and space-related agencies, public and private space firms and research laboratories;
- identification of sources of general or specific market research and intelligence on target countries.

In addition to the collection and dissemination of general intelligence, mechanisms must be improved for accessing and delivering more detailed, comprehensive and timely intelligence required by space firms for specific projects or procurements.

Another key priority activity starting next year will involve a series of public and private initiatives in support of space-based remote-sensing market development. In the wake of the 1995 launch of RADARSAT, RADARSAT International will undertake a major worldwide promotional effort to sell data and sign reception agreements. Canadian space- and ground-based RADARSAT suppliers will want to use the profile of the launch to promote their products. Canadian value-added companies will be encouraged to participate in the market-promotion and market-development activities to gain early advantage in overseas radar-

based remote-sensing markets. RADARSAT is an important government initiative, and its operational and commercial success will be a key theme over the next few years.

## Contacts

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## Space

Activity	Date	Location	Dept.	Contact
<b>Asia-Pacific South</b>				
Asian Aerospace '96: Info Booth	Feb-96	Singapore	DFAIT	613-996-5824
<b>East Asia</b>				
Outgoing Industry Mission	Jul-95	China	CSA	514-926-4364
<b>Multiple Markets</b>				
International Mobile Satcom Conference & Exposition	Jun-95	Ottawa	IC	613-954-3977
Airshow Canada	09-Aug-95	Abbotsford	IC	613-954-3748
Radarsat Promotional Tour	Oct-95	Various	IC	613-954-3166
<b>United States</b>				
U.S. Space Market Newsletter	Apr-95	Washington	DFAIT	613-944-9481
U.S. Space Market Study	Jun-95	Washington	DFAIT	613-944-9481
Military Satellite Mission	Oct-95	Los Angeles	IC	613-952-3977
<b>Western Europe</b>				
Space Industry Mission	May-95	Canada	CSA	514-926-4364
Paris Air Show: National Stand	Jun-95	Paris	DFAIT	613-996-3607
Industry Mission from Italy	Aug-95	Canada	DFAIT	613-995-9766
World Telecommunications Exhibition - National Stand	Oct-95	Geneva	DFAIT	613-995-6435

Note: Dates and locations are subject to change.

## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		





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# CANADA'S EXPORT STRATEGY

## *The International Trade Business Plan*

1995/96

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***An Integrated Plan for Trade, Investment  
and Technology Development***

**The International Trade Business Plan** is made up of an **Overview** highlighting Canada's international business development priorities, and a series of **Industry Sector Strategies**, which include lists of planned international activities. The following documents are available:

Overview

1. Advanced Manufacturing Technologies
2. Agriculture and Food Products
3. Aircraft and Parts
4. Automotive
5. Biotechnologies
6. Business, Professional and Educational Services
7. Chemicals, Plastics and Advanced Materials
8. Construction Products
9. Consumer Products
  - Apparel and Fur
  - Textiles
  - Footwear
  - Sporting Goods (including recreational watercraft)
  - Tools, Hardware and Housewares
  - Residential Furniture
  - Business and Institutional Furniture
10. Cultural Industries
11. Defence Products
12. Environmental Equipment and Services
13. Fish and Sea Products
14. Forest Industries

15. Information Technologies and Telecommunications
  - Sector Overview
  - Computers and Peripheral Equipment
  - Electronic Components
  - Geomatics
  - Instrumentation
  - Software Products and Computer Services
  - Telecommunications
16. Medical and Health-Care Products and Services
  - Medical Devices
  - Pharmaceuticals
  - Health-Care Services
17. Minerals and Metals
18. Oil and Gas Products and Energy Equipment
19. Power Equipment
20. Primary/Secondary Industrial Machinery
  - Mining, Forestry, Pulp and Paper
  - Agricultural Technology, Machinery and Equipment
  - Ocean and Marine Shipboard Technology
21. Rail and Bus Equipment
22. Space
23. Tourism

For information on how to receive the Overview, or additional Industry Sector Strategies, please call: **1-800-267-8376**

All monetary figures in this document are expressed in Canadian dollars unless otherwise indicated.

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## Tourism

The tourism industry supplies goods and services to business and pleasure travellers. The industry comprises, to varying degrees, sectors and subsectors of other industries such as accommodation, passenger transportation, travel agencies, tour operators, recreation and amusement, rental and private cars, food service and retail trade.

### International Environment

The World Tourism Organization predicts that international travel will grow at the much reduced rate of 4 percent through the 1990s. This slowdown, coupled with vast growth in supply, has dramatically increased international competition. As a result, the industry has shifted its focus from growth through expanding markets to growth through increased market share. Consequently, tourism is now demand-driven rather than supply-driven.

Since the 1950s, tourism has emerged as one of the most important economic growth sectors. Globally it is a \$2.65-trillion industry. A decade ago, Canada ranked tenth in terms of international tourism revenue, and currently ranks eleventh.

Throughout the 1980s, Canada's international tourism revenue grew at an average annual rate of 10.8 percent, whereas globally the rate was 9.5 percent. Despite its above-average performance, Canada's share of the world tourism market shrank marginally from 2.23 percent to 2.15 percent over the same period.

In the United Kingdom, France and Germany, three of Canada's four major overseas markets, Canada outperformed the industry and grew faster than the global average, indicating improved competitiveness.

Canada's share of the Japanese market, its most lucrative overseas market, slipped slightly (0.6 percent) between 1989 and 1993 from 4 percent to 3.4 percent, as a result of strong competition.

The picture is not as encouraging for the United States, Canada's most important international market. Although revenue from the U.S.

market has grown by 7 percent annually over the past decade, the overall average growth rate in U.S. international tourism expenditures grew by 14.1 percent. As a result, Canada's market share fell from 36 percent at its highest level (Expo '86) to 27 percent in 1992 (during the recession). The most recent statistics (1993) indicate Canada's share of the U.S. international tourism market stands at 27 percent.

Increased competition in the international market presents a major hurdle that Canada's tourism industry must overcome if it is to grow and prosper.

### Canadian Position

Tourism is a \$26-billion industry in Canada — \$8 billion international, \$18 billion domestic (1993). It accounts for 4 percent of gross domestic product (GDP) and 5 percent of employment, generating over 550 000 jobs. Tourism is Canada's fourth-largest source of export revenue behind automobiles (\$28 billion), auto parts (\$10 billion) and business services (\$9 billion). While Canada's tourism industry ranks only eleventh worldwide, its rate of growth in the 1980s is surpassed only by the U.S. and Australia among Organization for Economic Co-operation and Development (OECD) countries.

Of major concern to the federal government is the growing deficit in Canada's travel account. Although most industrialized countries run travel account deficits, it is the rate at which Canada's deficit is growing that is cause for concern. In 1988, Canada's travel account deficit was \$2.9 billion; by 1992, it almost tripled to \$8.2 billion. At the root

of the deficit is the increasing number of Canadians who vacation outside the country, particularly in the United States.

Currently, however, the trend is reversing and the travel account deficit is decreasing, largely due to the weak Canadian dollar. The exchange rate between the Canadian and the U.S. dollar is encouraging Canadians to travel within Canada and, based on preliminary results, attracting a greater number of Americans to vacation here.

### The U.S. Market

The United States is by far Canada's most important international tourism market. In 1993, 10.2 million U.S. leisure travellers visited Canada for one or more nights, generating \$3.1 billion in export revenue.

The United States is experiencing solid recovery, except in California where the economy is still faltering and in New England where recovery started later and remains spotty.

Despite marginal increases in annual revenue, Canada's position in the U.S. market has been eroding. Over the past five years, U.S. domestic and international travel has grown by 12 percent. At the same time, U.S. person-trips to this country increased by 3 percent. While revenue is a better measure of performance than the volume of visits, these numbers nevertheless point to a serious deterioration in competitiveness.

Canada's declining performance in the U.S. market can be attributed to several factors, including:

- decreased popularity of touring vacations, Canada's hallmark product;
- increased popularity of single-destination vacations and cruises;
- increased competition from other destinations, including the United States; and
- increased investment in attractions in the United States.

On the positive side, Canada has a major opportunity at hand. Every U.S. dollar is cur-

rently worth about \$1.35 - \$1.40 in Canadian funds, rather than \$1.10 as was the case in 1992.

### The European Market

In 1993, 1.8 million European tourists, (an 8-percent increase over 1992) visited Canada, generating \$1.5 billion in export revenue. The three primary European markets, the United Kingdom, Germany and France, account for 69 percent of European receipts. Italy, Switzerland, the Netherlands and Belgium, in order of importance, account for another 17 percent of Canada's European receipts.

Competition in the long-haul European markets has intensified over the last five years. The marketing of new destinations, particularly those in the Asia-Pacific region, has increased substantially in Europe. Additionally, the United States is a perennial competitor, attracting Europeans with good air access and low travel cost, not to mention the country's constant presence in the international news.

### The Asia-Pacific Market

Canada's tourism marketing in the Asia-Pacific region is guided by a consortium of public- and private-sector interests. The consortium's marketing budget in 1993 was \$5.7 million: \$1.7 million from Tourism Canada and \$4 million from other consortium partners.

Japan is Canada's most lucrative overseas market. In 1993, 409 000 Japanese tourists injected over \$450 million into the Canadian economy. Japan ranks second only to the United Kingdom in terms of overseas visitors.

In the second half of 1992, Japan suffered an economic decline. The economy continued to weaken in 1993 as businesses reduced capital expenditures and consumer spending stagnated.

Although Canada posted a 5.9-percent increase in Japanese receipts in 1992, the number of Japanese visitors to this country actually declined. In 1993, the number of Japanese tourists increased



by 3.6 percent over 1992 and market share stood at 3.4 percent, compared to 4 percent in 1989.

The Asia-Pacific region also comprises emerging markets such as Taiwan and South Korea, as well as the secondary but more mature markets of Hong Kong and Australia. Combined, these markets accounted for more than \$222.7 million of Canada's export revenue from the Asia-Pacific region in 1993.

### **The Business Travel Market**

Business travel to Canada accounted for \$983 million in 1993, or 24 percent of international travel revenues. It represents an especially lucrative market for Canada in the United States because of that country's proximity and its position as the primary generator of international business meetings, conventions and incentive travel. Canada's major competitive advantage in the U.S. market is its services infrastructure and customer-service orientation. Customs, taxation and air-accessibility issues remain obstacles, as does the magnitude of marketing investment needed in this highly competitive market.

## **Strategic Direction**

The thrust of Canada's tourism strategy is to support and improve the Canadian tourism industry's international competitiveness and increase profitability to create jobs.

Customer demand, the strategy's primary driving force, guides product enhancement and development, and its fuel is information — information on what customers want and their travel behaviour, competitors, market trends, technology, and other elements that affect competitiveness.

### **The U.S. Market**

Canada's major competition in the U.S. market is the United States itself. While U.S. citizens travel extensively abroad (45 million international tourist trips annually), domestic travel dominates.

Americans take almost one billion domestic tourist trips a year.

Tourism Canada will continue to take a "segmented approach" to the diverse U.S. market. Given operating budget reductions, an alternate approach would substantially dilute our marketing resources.

Since 1992, Tourism Canada's strategy has been to concentrate on increasing the amount of marketing resources for the U.S. domestic travel market. The strength of this strategy has been reconfirmed by recent market research, which indicates that the more frequent U.S. visitors to this country also take many domestic pleasure trips.

In order of priority, the U.S. program is directed at:

- retired seniors, aged 55+ years with an annual household income of \$50 000+;
- middle-aged workers, aged 46-64 years with an annual household income of \$60 000+;
- baby boomers, aged 26-45 years with an annual household income of \$60 000+ (selected market niches).

Customer segments are further refined through the use of a travel index identifying households with a high likelihood of travel and an affinity for Canadian travel products.

### **The European Market**

Integrated marketing strategies are expected to result from increased partnerships between Tourism Canada, other levels of government and the private sector. Marketing activities will emphasize specific Canadian travel experiences as opposed to increasing general awareness. The program will concentrate on promoting culture, nature and outdoor activities.

In order of priority, the European program is directed at the United Kingdom, France and Germany. Culture and nature appeal to a potential six million long-haul travellers aged 30 to 54 years. Culture and comfort products largely target the United Kingdom, which has a potential market

of six million long-haul travellers aged 55 years and over. Sports and outdoor activities will be promoted to a potential eight million long-haul travellers aged 24 to 45 years.

### Asia-Pacific Market

The strategy is to position Canada as a high-quality, four-season travel destination in high-yield customer segments. Partnerships between government and the private sector will remain the key to marketing in the Asia-Pacific region. Direct marketing techniques will be used, and marketing will shift to new-growth customer segments. The priority in Japan is to shift visits from the peak season to the shoulder and off-seasons. More Canadian products will be developed and promoted along regional themes in Japan. The new Kansai International Airport will provide greater air capacity to the Kansai region as Air Canada opens new routes, making it possible to further promote the growing fully independent travel market in Japan.

In order of priority, the Japanese marketing program will focus on:

- female office workers aged 20 to 29 years;
- middle-aged workers, which includes full-moon couples (45-54 years) and family travellers (baby boomers and their children);
- niche markets, such as skiers, business incentive travellers and students.

Special attention will be given to the independent traveller in all of these customer segments. In the secondary markets of the Asia-Pacific region, high-yield customers will be targeted.

### The Business Travel Market

In order of priority, the Business Travel Market Program will:

- target marketing activities to create a favourable perception of Canada as a destination of choice for meetings;
- focus resources at the customer level through relationship marketing;

- address the specific needs and expectations of individual organizations;
- identify new business opportunities.

This will help increase the U.S. meetings market contribution to Canada's tourism receipts by \$75 million.

#### *Note:*

On October 25, 1994, the Prime Minister, the Right Honourable Jean Chrétien, announced the creation of a Canadian Tourism Commission. This new body will be directed by a Board composed of federal, provincial/territorial and private-sector representatives.

The Commission's main responsibility will be marketing Canada as a tourist destination to international and domestic tourists.

The federal government will provide base funding of \$50 million annually.

The creation of the Canadian Tourism Commission will have a major impact on Canada's 1995-96 Tourism International Trade Business Plan. It was not possible at the time of publication to outline the nature and direction of the change.

## Contacts

Industry Canada  
Tourism  
235 Queen Street  
Ottawa K1A 0H6  
Tel.: (613) 954-3830  
Fax: (613) 952-7906

Department of Foreign Affairs  
and International Trade  
U.S. Trade and Tourism Development Division  
125 Sussex Drive  
Ottawa K1A 0G2  
Tel.: (613) 944-7344  
Fax: (613) 944-9119

## Tourism

Activity	Date	Location	Dept.	Contact
<b>United States</b>				
Soft-Adventure: NEBS to Chicago	TBD	Chicago	IC	902-566-7445
Marketing: U.S. Middle-Age Segment	TBD	United States	IC	613-954-3817
Marketing: U.S. Baby-Boomer Segment	TBD	United States	IC	613-954-3817
Fishing and Hunting	TBD	Atlanta	IC	902-566-7445
Atlantic Inns: NEBS to New York	TBD	New York	IC	902-566-7445
Tourism: Round Table (Eastern Seaboard/Central U.S. operators)	TBD	Atlantic Canada	IC	902-566-7445
Meeting and Convention: NEBS to Chicago	TBD	Chicago	IC	902-566-7445
Small- and Medium-Sized Motel Operators: NEBS to Boston	TBD	Boston	IC	902-566-7445
Soft-Adventure: NEBS to Boston	TBD	Boston	IC	902-566-7445
Soft-Adventure	TBD	Atlanta	IC	902-566-7445
National Association Senior Travel Planner Seminar/Workshop	TBD	Dallas	DFAIT	214-922-9806
Golf Canada (Cleveland)	Feb-95	Cleveland	DFAIT	313-567-2340
Dateline Canada	Apr-95	Los Angeles, San Francisco	DFAIT	213-687-7432
National Tour Association Spring Exchange	Apr-95	Memphis	N.B.	506-453-3984
Spotlight Canada	Apr-95	Pittsburgh	DFAIT	412-392-2308
Spotlight Canada	May-95	Los Angeles	DFAIT	213-687-7432
Media Workshop	May-95	Boston	DFAIT	617-262-3760
Showcase Canada	May-95	New York	DFAIT	212-596-1600
Canada Club Card (U.S. Mature Leisure Travellers)	May-95	U.S.	IC	613-954-3817
Leading Tour Operators Seminar	May-95	New York	DFAIT	212-696-1600
Spotlight Canada "Rail"	May-95	Seattle	DFAIT	206-443-1777
American Association of Retired Persons	May-95	Anaheim	N.B.	506-453-3984
Outdoors Writers Association of America	Jun-95	Orono	N.B.	506-453-3984
Seniors Direct Mail Campaigns (2)	Jun-95	Boston	DFAIT	617-262-3760
Denver Representative Locator	Jun-95	Denver	N.B.	506-453-3984
Multi-Modal Circle Seminars	Sep-95	Seattle	DFAIT	206-443-1777
Yukon Gold Rush Centenary Seminars	Sep-95	Seattle	DFAIT	206-443-1777
Spotlight Canada	Sep-95	Washington, D.C.	DFAIT	202-682-1740
Update Canada Seminar	Oct-95	Pittsburgh	DFAIT	412-392-2308
Society of American Travel Writers	Oct-95	Los Angeles	DFAIT	213-687-7432
NEBS (Canadian Winter Products)	Oct-95	Chicago	DFAIT	312-616-1860

Note: Dates and locations are subject to change.

Activity	Date	Location	Dept.	Contact
National Tour Associations: Conventions	31-Oct-95	Dallas, Reno	IC	613-954-3870
Ski Canada	Nov-95	Detroit	DFAIT	313-567-2340
Spotlight Canada	Nov-95	Boston	DFAIT	617-262-3760
Dateline Canada	Nov-95	Los Angeles	DFAIT	213-687-7432
NEBS Mission	Nov-95	Cleveland, Detroit	DFAIT	313-567-2340
Senior Leaders Seminar/Marketplace	Nov-95	Miami	DFAIT	305-579-1600
NEBS (Atlantic Canada)	Nov-95	Boston	DFAIT	617-262-3760
NEBS (First Nations)	Nov-95	Seattle	DFAIT	206-443-1777
National Tour Association	Nov-95	Dallas	N.B.	506-453-3984
NEBS (Atlantic Canada)	Nov-95	New York City	DFAIT	212-596-1600
Seniors Seminars (4)	Dec-95	Detroit	DFAIT	313-567-2340
American Bus Association	04-Dec-95	Fort Lauderdale	IC	613-954-3870
Adventure Canada	Jan-96	Los Angeles	DFAIT	213-687-7432
Dateline Canada	Jan-96	Los Angeles, San Francisco	DFAIT	213-687-7432
Business Travel Seminar (Series)	Jan-96	Chicago	DFAIT	312-616-1860
AAA Education Seminar/Marketplace	Jan-96	Cincinnati	DFAIT	513-762-7655
Outdoor Adventure Canada	Jan-96	Buffalo	DFAIT	716-858-9500
Bass Show	Jan-96	Virginia	N.B.	506-453-3984
Senior Marketplace	Jan-96	New England	N.B.	506-453-3984
Spotlight Canada	Jan-96	Los Angeles	DFAIT	213-687-7432
Group Tour Promos	Feb-96	Chicago	DFAIT	312-616-1760
NEBS (Atlantic Canada)	Feb-96	Boston	DFAIT	617-262-3760
Incoming U.S. Mission	Feb-96	Canada/Various	DFAIT	612-333-4641
Strategic Matchmaking Tourism	Feb-96	Seattle	DFAIT	613-944-7348
Spotlight Canada (3 cities)	Feb-96	U.S./Various	DFAIT	313-567-2340
Spotlight Canada	Feb-96	Dallas	DFAIT	214-922-9806
Adventure Canada	Feb-96	Washington, D.C.	DFAIT	202-682-1740
Spotlight Canada	Feb-96	San Francisco	DFAIT	415-543-2550
Spotlight Canada (South Florida)	Feb-96	Miami	DFAIT	305-579-1600
Adventure Canada	Feb-96	Boston	DFAIT	617-262-3760
Spotlight Canada	Feb-96	Cincinnati	DFAIT	513-762-7655
Spotlight Canada	Mar-96	Buffalo	DFAIT	716-858-9500
New Exporters Mission	Mar-96	Atlanta	DFAIT	404-577-6810
Product Newsletter (Quarterly)	Mar-96	Los Angeles	DFAIT	213-687-7432
Snapshots Canada Newsletter (Quarterly)	Mar-96	Washington, D.C.	DFAIT	202-682-1740
Service Contract	Mar-96	Canada	DFAIT	613-944-6903

Activity	Date	Location	Dept.	Contact
Tourism Training	Mar-96	Canada	DFAIT	613-944-6903
Contact Management System (Computer)	Mar-96	Canada/Various	DFAIT	613-944-6903
Post Marketplaces	Mar-96	Canada/Various	DFAIT	613-944-6903
Printing and Distribution	Mar-96	Canada/Various	DFAIT	613-944-6903
Sea Trade	Mar-96	Miami	N.B.	506-453-3984
Export Ready Seminars	Mar-96	Canada/Various	DFAIT	613-944-6903
Dateline Canada	Mar-96	New York City	DFAIT	212-596-1600
Spotlight Canada Marketplaces	Mar-96	Seattle	DFAIT	206-443-1777
Spotlight Canada	Mar-96	U.S./Various	DFAIT	613-944-6903
Spotlight Canada	Mar-96	Minneapolis	DFAIT	612-333-4641
Dateline Canada	Mar-96	Los Angeles	DFAIT	213-687-7432
Showcase Canada	Mar-96	Los Angeles	DFAIT	213-687-7432
Showcase Canada	Mar-96	Dallas	DFAIT	214-922-9806
National Trade Shows	Mar-96	Dallas	DFAIT	214-922-9806
AAL - Canada Products Marketplace	Mar-96	Dallas	DFAIT	214-922-9806
Anniversaries/Festival Outdoor Events Seminar	Mar-96	Miami	DFAIT	305-579-1600
ISE	Mar-96	California	N.B.	506-453-3984

For details on other activities, as they become available, please call:

Industry Canada

Tourism

U.S.: (613) 954-3830

Asia-Pacific (613) 954-3962

Europe: (613) 954-1900

Department of Foreign Affairs and International Trade

Tourism U.S.: (613) 944-7344





## Acronyms and Initialisms Used in The International Trade Business Plan

(This list does not include sector-specific references)

ACOA	Atlantic Canada Opportunities Agency	IC	Industry Canada
AG Can	Agriculture and Agri-Food Canada	IDRC	International Development Research Centre
ASEAN	Association of Southeast Asian Nations	IFI	international financial institution
BBS	electronic bulletin board system	ISO	International Standards Organization
BOSS	Business Opportunities Sourcing System	ITBP	International Trade Business Plan
CCC	Canadian Commercial Corporation	ITC	International Trade Centre
CIDA	Canadian International Development Agency	MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
CIS	Commonwealth of Independent States	MDB	multilateral development bank
CSA	Canadian Standards Association	NAFTA	North American Free Trade Agreement
DFAIT	Department of Foreign Affairs and International Trade	NATO	North Atlantic Treaty Organization
DFO	Department of Fisheries and Oceans	NRC	National Research Council
DND	Department of National Defence	NRCan	Natural Resources Canada
EC	Environment Canada	NRCan-CFS	Natural Resources Canada - Canadian Forest Service
EDC	Export Development Corporation	OECD	Organization for Economic Co-operation and Development
EU	European Union	PEMD	Program for Export Marketing Development
FITT	Forum for International Trade Training	R&D	research and development
FORDQ	Federal Office of Regional Development - Quebec	SMEs	small- and medium-sized enterprises
FSU	former Soviet Union	UNEP	United Nations Environmental Program
FTA	Canada-U.S. Free Trade Agreement	WED	Western Economic Diversification
GATT	General Agreement on Tariffs and Trade	WTO	World Trade Organization
GDP	gross domestic product		
GNP	gross national product		
HRDC	Human Resources Development Canada		



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